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COMMERCIAL FISHERIES REVIEW

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COMMERCIAL FISHERIES REVIEW

A REVIEW OF DEVELOPMENTS AND NEWS OF THE FISHERY INDUSTRIES
PREPARED IN THE DIVISION OF COMMERCIAL FISHERIES

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Cover: The oyster, regarded by most peoples of the world as a luxury, occurs in the United States in such abundance that it is served regularly by families of nearly all circumstances. The boats in the foreground are oyster dredge boats and the piles of oyster shells attest to the importance of this Chesapeake Bay fishing point as an oyster-shucking center.

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COMMERCIAL FISHERIES REVIEW

September 1946 Washington 25, D. C. Vol. 8, No. 9

FEEDING FISH MEALS TO PULLETS

By Hugo W. Nilson* and Richard W. Schayer**

A number of feeding tests with chicks were conducted at the College Park Laboratory of the Fish and Wildlife Service to determine, among other objectives, whether feeding comparatively large quantities of commercial grade and experimentally spoiled fish meals would adversely affect the flavor of the flesh. Lanham and Nilson (1946) reported that no fishy or other off flavors were noted, except in a very few instances, in the flesh of 6-week old chicks fed diets containing about 30 percent fish meal. It was then thought desirable to determine whether feeding large quantities of meal would adversely affect the flavor and color of the eggs or the flesh of older birds. The premise was that if comparatively large quantities had little or no effect, smaller amounts would be even less liable to produce off flavors or undesirable color.

The pullets used were selected from series 10 of the chick-feeding experiments reported by Lanham and Nilson (1946). They were Barred Plymouth Rocks that were hatched August 12, 1941, and fed various experimental diets for a 6-week period. During this interval they were housed in battery cages fitted with screen floors in groups of 10 or 11. The cages were in a room maintained at 80° F., and each cage had brooding facilities.

Except for one group fed a commercial type growing mash (Almquist, Jukes and Newlon, 1938), the pullets were fed a semi-purified diet containing a quantity of commercial pilchard meal equivalent to 22 percent crude protein. Dextrin, sugar, and lard were used as sources of calories. The previously mentioned experiment was terminated on September 24, and on September 27 selected pullets were allotted to the following experiment.

The birds were at first kept individually in battery cages, but later they were transferred to 12 individual laying cages. Two birds were selected for each of six groups. A cockerel was selected by mistake for the group fed the commercial pilchard meal diet. It had an initial weight of only 127 grams but gained to a weight of 2526 grams on February 13, when it was killed and dressed. The flesh had no fishy flavor.

The pullets that received the growing mash during the previous experiment were fed the same ration during this experiment also. For the others, the ration, in parts by weight, consisted of the following:

Alfalfa meal	- 2.5	Dried brewer's yeast	- 1.0	Pilchard meal	- 25	Soybean oil	- 1.0
Cod liver oil	- 1.0	Ground yellow corn	- 68	Salt	- 0.5	Wheat germ	- 1.0

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NOTE: The authors wish to acknowledge the helpful assistance of Drs. H. R. Bird and Max Rubin of the Department of Poultry Husbandry, University of Maryland.

This ration was very similar to that used previously, except that corn meal was used as the chief source of energy. The corn and alfalfa meals also furnished a fair quantity of vegetable protein. For one group, 2 percent liver extract was substituted for an equal weight of corn meal.

Commercial pilchard meal analyzing about 70 percent crude protein was used as the principal source of protein. This was replaced on an equal weight basis by 100, 20, and 10 percent of experimentally spoiled meal also analyzing about 70 percent crude protein. The latter was fed in order to determine whether meal that had a stronger odor would be more likely to produce off flavors in eggs and flesh. The meal was spoiled under conditions of high heat and humidity in an aerobic environment and then dried at a temperature under 120° F. Previous experiments had shown that certain vitamins, and possibly other growth-promoting factors, were synthesized during spoilage. These growth-promoting factors had been found to be water soluble (Lanham and Nilson, 1946).

The pullets grew satisfactorily and began laying between January 17 and February 10 (Tables 1 and 2). The eggs were of normal size for pullets, and the color of the yolks was commercially acceptable, although not as deeply colored as would be expected from a ration that contained so much yellow corn meal. The flavor of all the eggs was very acceptable with no traces of off flavors.

Table 1 - Data on Gain in Liveweight, and Feed Intake of Pullets Fed Rations Containing 25 Percent Commercial or Spoiled Pilchard Meal and Growing Mash, from October 27 to Date Indicated

Diet designation	Pullet number 1/	Liveweight		Date reached	Gain in liveweight	Feed intake	Feed per gram gain
		Initial	Maximum before laying				
		Grams	Grams		Grams	Grams	Grams
Growing mash	135	540	2166	1-30	1626	11098	6.83
	200	637	2175	2-13	1538	11524	7.49
Commercial pilchard meal:							
No addition	147	181	2384	2-13	2203	12069	5.48
Two percent liver extract	192	761	2579	1-16	1818	10149	5.58
	195	616	2366	2-13	1750	8909	5.09
Twenty percent spoiled meal substituted for commercial meal	107	692	2484	1-30	1792	8979	5.01
	183	700	2491	1-30	1791	9776	5.40
Ten percent spoiled meal substituted for commercial meal	108	594	2369	2-13	1775	9442	5.32
	163	607	2185	2-13	1578	9353	5.93
Spoiled pilchard meal	165	617	2019	1-16	1402	7399	5.28
	182	717	2597	2-13	1880	10881	5.79

1/Pullets 135 and 200 were fed similar, and 147, 192, and 195 were fed analogous diets during the first 6 weeks period. Pullets 107 and 108 were fed a commercial pilchard meal diet, plus water extract, equivalent to 10 percent spoiled meal. Pullets 182 and 183 were also fed the diet containing water extract, but with the addition of 10 mg. pantothenic acid per 100-gram diet. Pullets 163 and 165 were fed the diet in which there was a substitution of 10 percent spoiled meal for commercial meal.

Since the fish meals had no adverse effect on the flavor of the eggs, it was considered desirable to determine whether the fertility and growth of the second generation chicks would be influenced by the meals fed. Some of the pullets were artificially inseminated on February 13, and all of them were inseminated on February 17 and again on February 24. The pullets, since hatching, had been kept under close confinement, and their muscles were very flabby. Consequently, the

insemination operation was difficult; and although the operator had had considerable successful practice in this technique, the pullets almost immediately discontinued laying for an extended period, and two died. Usually, range-fed pullets are used in artificial insemination experiments because their muscles have better tone from exercise. It was obvious that this part of the experimental work could not be continued.

The data in Table 1 that deal with feed intake and gain in liveweight are limited to the period of constant gain because most of the pullets lost weight after they began laying or after insemination. The loss of weight after artificial insemination was particularly marked with some pullets. Within the limits of variability for such small groups, the data indicate that all of the rations were approximately equal in producing gain in liveweight.

The surviving pullets were fed their respective rations until they began to lay again. Further observations confirmed the earlier ones that none of the eggs was off flavored and the color of the yolks was commercially acceptable.

Table 2 - Data for Egg Production of Pullets

Diet designation	Pullet number	Date first egg	Eggs per month				Artificial insemination	
			Jan.	Feb.	Mar.	Apr.	Date first insemination	Days not laying
Control mash	135[1]	1-26	4	12	13	6	2-13	22
	200[2]	1-25	4	12	5		2-13	23
Commercial pilchard meal:								
No addition	147[3]	2-10	-	9	-	-	2-17	-
Two percent liver extract	192[1]	1-17	8	9	5	8	2-13	37
	195[4]	2-7	-	6	-	-	2-17	-
Twenty percent spoiled meal substituted for commercial meal	107[1]	1-30	2	6	5	4	2-13	38
	183[5]	1-29	2	7	11	4	2-13	24
Ten percent spoiled meal substituted for commercial meal	108[1]	2-8	-	8	4	2	2-17	34
	163[1]	1-25	5	8	3	3	2-13	27
Spoiled pilchard meal:								
No addition	165[1]	1-17	5	2	3	3	2-13	43
	182[1]	1-30	1	3	6	2	2-17	33

1/ Killed and dressed shortly after April 10.
2/ Killed and dressed on April 27.
3/ Died as result of internal hemorrhage shortly after first insemination.
4/ Died on February 27 as a result of broken egg in abdomen.
5/ Killed and dressed March 30.

All of the pullets were killed late in March and early in April. They were dressed and distributed to various staff members, who reported on taste tests. All reported that the flesh was very tender, and the flavor was satisfactory. Incidentally, practically all of the pullets, before the close of the experiment, regained the weight that had been lost. There was no report of any fishy or other off flavor.

It was noted that the color of the legs and skin of the birds was very bleached, except for those birds fed the 100 percent level of spoiled pilchard meal. Normally, the yellow color is very deep when the ration that is fed contains so much yellow corn meal. The color of the legs and skin of the birds fed the growing mash was also bleached. Numerous experiments have been reported elsewhere concerning the bleaching effect of rations containing fish meal or meat scraps. This

finding, therefore, was not unexpected, especially with the rations containing so much fish meal. The significance of the darker color of the legs and skin of pullets fed the ration containing the 100-percent level of experimentally spoiled meal was not studied further, since it is not a recommended practice to treat meal in that manner before feeding.

The number of birds included in this experiment is very small, but the results consistently show that the various fish meals did not produce fishy or other off flavors in either eggs or flesh. This means that up to 10 percent fish meal can be included in farm or commercial rations that are to be fed to poultry, with the assurance that there will be no undesirable effects.

The bleaching effect of fish meals on the color of the legs, skin, and egg yolks must be recognized. It is notable, however, that even when large quantities of fish meal were fed in these tests, the yolk color was rated commercially satisfactory by experienced neutral observers. Of course, part of the color might have been due to the high percentage of yellow corn meal in the rations. The yolks of the eggs laid by those pullets fed the commercial-type growing mash had a depth of color similar to that of the egg yolks from the birds fed the experimental diets containing high levels of fish meal. Thus, although the commercial-type mash probably had less bleaching action because it contained less fish meal and meat scrap, the color of the yolks was not different because this mash also contained less yellow-pigment-carrying corn and alfalfa.

The yellow color of the legs and skin of all the birds used in these experiments was much paler than would ordinarily be the case with farm-raised pullets of the same breed. It is doubtful, however, that the lighter color would reduce commercial acceptability, since it was not unattractive. In fact, this bleaching effect might be desirable with the Mediterranean and English breeds, which have black pigmented legs and white skin.

CONCLUSIONS

1. The flesh of pullets that have been fed rations containing about 25 percent of commercial, or experimentally spoiled, pilchard meal or mixtures of both does not have a fishy or other off flavor.

2. The eggs have a satisfactory flavor.

3. The color of the yolks is commercially acceptable.

4. There is less yellow pigment in the legs and skin of pullets when these birds are fed rations containing fish meals, the degree of bleaching depending on the relative contents of fish meal and feeds carrying yellow pigment in the rations fed.

NOTE: An article by Drs. Max Rubin and H. R. Bird, entitled "The Apparent Antagonism Between Vitamin A and Carotinoids in the Fowl," appeared in Science, 103: 584-585 (1946). Their paper presents evidence that the bleaching effect may be caused by vitamin A, that carotene fed at comparable levels does not exert a suppressing effect on pigmentation, and that the inhibition of pigmentation occurs when there is a sufficiently large bodily store of vitamin A and is not an exclusively intestinal phenomenon. However, our results indicate that the degree of bleaching is not commercially serious even when large proportions of fish meal are fed.

LITERATURE CITED

ALMQUIST, HERMAN JAMES; JUKES, THOMAS HUGHES; and NEWLON, W. E.

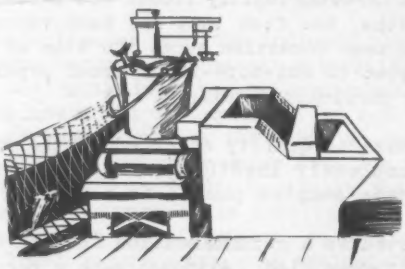
1938. Feeding Chickens. Calif. Univ. Agric. Ext. Serv. Circ. 108, 38 pp. illus. Berkeley.

LANHAM, WILLIAM B., JR., and NILSON, HUGO W.

1946. Some Studies on the Feeding Value of Fish Meals. Unpublished manuscript, Fish and Wildlife Service, Department of the Interior, Washington, D. C.

THE PILCHARD FISHERY

The Pacific Sardine or Pilchard Resource is Unique. It supports the largest fishery in the western hemisphere--nearly 25 percent of all fish caught in the United States are sardines; it is the cheapest source of protein food for human consumption, and it is the most important source of fish meal and oil which are vital in the nutrition of poultry and other livestock. It yields the largest volume of canned fish produced in the United States (exclusive of Alaska), and is an important source of vitamins A, D, B_1, and G (B_2).



Weighing equipment for unloading fish.

The Pacific Sardine is a Pelagic Fish, traveling in the upper layers of ocean in schools or shoals of varying size from a few tons to hundreds of tons of fish. The characteristics of the sea water rather than the sea bottom direct their movements and because these characteristics are constantly changing, the sardines constantly move. They do this vertically as well as horizontally, so that at times schools travel at the surface, at other times far below, and the luck of fishermen fares accordingly.

--Senate Document No. 51

WRAPPING MATERIALS FOR FROZEN FISH

By Martin Heerdt, Jr. *

Many wrapping materials that are completely satisfactory in preventing desiccation of frozen fish products during storage do not furnish acceptable resistance to the penetration of air from the outside.

Atmospheric oxygen causes the loss of fresh flavor, the development of rancidity, the bleaching or fading of natural color, and the development of colors foreign to the fish. To minimize these deleterious effects, contact with oxygen must be avoided; for even the amount of air often inadvertently included at the time of packaging contains enough oxygen to start these oxidative changes on their way.

Experiments in progress at the Seattle Laboratory of the Fish and Wildlife Service strikingly demonstrate the inadequacy of ordinary moisture-vapor proof films in keeping air away from frozen fish fillets and steaks that have been wrapped according to present practice. Two methods were employed in packaging duplicate lots of fish. The first, or conventional method, consisted of wrapping the fillets or steaks in moisture-vapor resistant film. The second consisted of vacuum packing the fillets in hermetically sealed tin cans. After being rapidly frozen and subsequently placed in cold-storage for several months, the fish that had been vacuumized and hermetically sealed in tin were in the same condition as at the time of packing, while the samples that had been wrapped in moisture-vapor proof paper were lacking in flavor, faded, discolored, and partially rancid.

With many species a tremendous decrease in quality occurred in the wrapped samples, in some cases rendering them completely inedible, in contrast to the fresh, unchanged condition of the duplicate samples packed in evacuated tins.

These results should not be interpreted as a recommendation for the use of evacuated tin containers in the storage of frozen fish. Although such a packaging method would undoubtedly keep fish in an excellent condition over a long period of time, there is danger that if frozen fish were packed in ordinary tin cans, consumers or dealers might store the cans at room temperatures regardless of any printed cautions. Under such conditions, frozen foods would defrost and spoil rapidly; and when hermetically sealed, defrosted canned foods possess all of the requirements for the growth of Clostridium botulinum with consequent toxin production. The findings should serve to emphasize the importance of the selection or development of packages, films, or wraps that are not only moisture and vapor proof but that also resist the entrance of atmospheric oxygen.

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WORKMEN'S COMPENSATION FOR SEAMEN*

By M. D. Kossoris and Joseph Zisman

Seamen constitute one of this country's major industrial groups not covered by any kind of workmen's compensation law. This is contrary to the situation in nearly all other maritime nations. What is particularly interesting is that United States merchant seamen do not want any such legislation at present.

Seafaring is a hazardous occupation. Estimates for the last prewar year, 1938, indicate that out of a total estimated work force of about 132,000 seamen employed on American-flag merchant vessels, about 14,500 were the victims of accidental injuries and diseases arising during the course of employment on a vessel.

These accidents and diseases cost shipowners about 4½ million dollars, exclusive of claim-handling expense. As seamen are provided free medical treatment and hospitalization in U. S. Marine Hospitals, this single year's injuries and diseases cost the Federal Government about $700,000. Injured seamen, or their dependents in case of death, are estimated to have received about $3,600,000 after due allowance for attorney fees and court costs.

The estimates for 1938 indicate that about 300 seamen were killed, 400 suffered some degree of permanent disability, and 13,800 suffered temporary disabilities. Accidental injury caused approximately two-thirds of these cases and disease the remainder. It is important to realize in this connection that the present rights of seamen embrace the right to compensation for disease to a much greater extent than is customary under even the most liberal type of workmen's compensation act in this country. Generally the types of diseases which are compensable under such laws must arise specifically out of work hazards. Even under a very liberal law and administration, these industrial diseases rarely exceed 5 percent of the total injury count. As against this, fully one-third of all work disabilities to seamen during 1938 were diseases.

The reason for this difference lies largely in the conditions under which seamen work and live. A seaman generally is employed for the duration of a voyage.

*This article is reprinted from the Monthly Labor Review (U. S. Department of Labor) for June 1946. Several paragraphs of only limited interests to the readers of Commercial Fisheries Review have been omitted.

Editor's Note: Fishermen in many cases have been considered as "seamen" by courts as well as by administrative agencies. Fishermen are not considered as seamen:

1. If they are working on waters that are not navigable.
2. If they are not at the same time members of the crew of the vessel.
3. If they perform work on a vessel under 18 net tons.

Generally the interpretation of the maritime laws as to their extension to fishermen has tended to be broad and liberal.

He "signs on" under the terms of "shipping articles" which constitute a contract of employment between the seaman and the master of the vessel, and he "signs off" when the voyage is terminated and he has received his pay. From the moment he reports for duty and until the voyage ends, the seaman is "in the service of the vessel." On board ship, he lives in the quarters assigned to him; he eats the food served to him; he is on duty 8 hours per day--4 hours "on watch" at a time, with 8 hours "off watch." He cannot leave the vessel at any port without the master's permission. In other words, while in the service of the vessel he has no control over his environment, over his food and living conditions, and he is obviously exposed to the hazards of the elements as well as the climatic conditions of the various parts of the world to which the voyage takes him. Furthermore, the seaman has no choice but to obey the master of a ship, no matter how hazardous the mission to which he is assigned.

While living conditions are good on modern ships, many of the older ships offer only the barest of comforts. Frequently no medical attention is available, and injured or ill seamen are usually treated by one of the officers and put ashore at the nearest port if conditions require it.

In the light of these conditions, it is clear why the rights of seamen cover a wide variety of diseases not normally regarded as having any logical connection with employment. These conditions also provide the explanation why any kind of workmen's compensation act for seamen should make no distinction between work injuries and diseases which arise during the course of employment.

THE "ANCIENT RIGHTS" OF SEAMEN: There are several other important differences between seamen and other industrial workers. One of these is the right--dating back to ancient maritime law--to wages to the end of the voyage, even though a disability occurs before then. Another is title to a "maintenance and cure" allowance until the disability is removed, or until it becomes clear that no further medical attention will contribute toward lessening the degree of the permanent impairment.

THE SEAMEN AND WORKMEN'S COMPENSATION: A Senate Committee, which had before it a workmen's compensation bill (H. R. 6881) proposed by shipowners, therefore found itself confronted in 1940 with a situation in which the employers fought for a workmen's compensation act, while the employees vigorously opposed it. The Senate Committee sought more light on the subject and requested a number of Federal agencies to set up a joint committee to investigate the whole problem and to report its findings. This Committee, hereafter referred to as the Interdepartmental Committee, consisted of representatives from the Department of Commerce, the Department of Labor, the United States Maritime Commission, the United States Employees' Compensation Commission, and the Maritime Labor Board.

PRESENT SETTLEMENT METHODS: When a seaman is injured or becomes ill while in the service of the vessel, his superior makes a report to the master of the vessel, who makes the required entry in the ship's log, reports to the owner, and in some cases to the United States Coast Guard. The seaman is brought back to his original port of sailing or to some other agreed-upon port. There he gets in touch with the claims official of the shipowner. Arrangements are made for such wage and maintenance payments as may be due the seaman and the negotiation for the claim settlement begins.

As a general rule, the seaman conducts his own negotiations. When he does, the available evidence indicates that a settlement usually is reached quickly.

The settlement covers four items:

1. Wages to the end of the voyage.
2. A maintenance allowance for the out-patient and convalescence period.
3. Cost of such other items as medicines, medical appliances, hospitalization not furnished by the United States Marine Hospitals, artificial limbs, etc.
4. Indemnity if the liability of the shipowner can be established--covering compensation for pain and suffering, loss of future earning power because of permanent impairment, and sometimes loss of wages until other jobs become available.

The employment of attorneys tended to delay settlement. One reason for this was that the seamen used attorneys when they had difficulty in establishing the negligence of the shipowners, or their agents, or the unseaworthiness of the vessel. In death cases, shipowners frequently insisted that the claimants establish legal proof of dependency, thus compelling the dependents to obtain such rulings from the courts. The reason for this procedure, obviously, was to protect the shipowners against having to make payments to more than one claimant.

Permanent disability cases usually involved longer lags between the date of injury and the date of settlement. The main reason for this was the desirability of waiting until the wound had healed and the degree of residual impairment could be ascertained.

COMPARISON OF RECOVERIES--UNDER THE PRESENT SETTLEMENT METHOD: Of 5,487 cases reported to the Interdepartmental Committee for which disability developed during 1938, the average amount recovered per case was $283. Less than 2 percent received $2,500 or more, and less than 1 percent received $5,000 or more. Injury cases averaged $333, compared with $169 for disease cases. None of the disease cases was settled for as much as $5,000.

Practically all of the 5,487 cases resulted in recoveries to the seamen or their dependents. Only 29 were still pending in the spring of 1941, when the survey was concluded, and 104 had been closed without payment. Among the latter, however, no claims had been made in 76 cases, and in only 28 had the shipowners refused to make any settlement.

After deducting attorney fees and other litigation expenses, the distribution of the total number of cases in which recoveries were made and the average amount per case, by extent of disability, was as shown in Table 1.

Table 1 - Average Net Recovery in 5,354 Disability Cases

Extent of disability	All cases		Injury cases		Disease cases	
	Number	Amount	Number	Amount	Number	Amount
All cases	5,354	$ 268	3,631	$ 319	1,723	$ 159
Death	112	1,761	57	3,161	55	310
Permanent total	18	3,646	8	5,312	10	2,213
Permanent partial	188	1,898	176	1,968	12	879
Temporary total	5,036	162	3,390	174	1,646	136

The table presents two significant features: (1) That cases of disease were settled at lower average amounts than were injuries, in every category of disability; (2) that death cases were settled for relatively small amounts. The latter point may be explained by the fact that seamen frequently have few close of kin dependent upon them. Furthermore, these dependents had the burden of establishing the neg-

ligence of the shipowner or the unseaworthiness of the vessel. Frequently, too, they were not in a position to press their claims. Consequently only about half the fatalities involved indemnity payments.

One of the facts to emerge from the Interdepartmental Committee study was that it seemingly paid the seaman to employ attorneys. The seaman who negotiated his settlement directly averaged a settlement amount of $197. Those who used attorneys netted an average amount of $617; $532 if no court action was involved, and $1,234 if the case was litigated. While the attorney cases frequently involved the more severe injuries, the chief claims agent of one of the companies explained that he automatically raised his settlement offer when an attorney called, so as to head off litigation. Thus, the seaman who refused to accept a settlement of $100 was offered $250 if he had his attorney phone the agent. Even after the attorney deducted one-third of the settlement as his fee, the seaman was still better off than if he had not employed an attorney.

UNDER WORKMEN'S COMPENSATION: The Interdepartmental Committee posed three questions relative to compensation for injuries to seamen:

(1) Whether the principle of workmen's compensation was more desirable than a system of liability based upon negligence;

(2) Whether it was possible to devise a workmen's compensation system that would preserve for injured seamen their ancient rights of wages to the end of the voyage and of maintenance and cure; and

(3) Whether such a system would be "desirable and advantageous from the standpoint of the seamen, the industry, and the public."

The committee answered the first two questions with an unqualified "yes." The answer to the third question, while affirmative, was qualified. The committee had at hand the findings of its statistical subcommittee which showed clearly that the seamen would lose decidedly if the provisions of the Longshoremen's and Harbor Workers' Compensation Act, which was under consideration by the Senate Committee, were extended to them, and that they were better off under their present employer liability system. To overcome this difficulty, the subcommittee suggested certain modifications of the usual type of workmen's compensation act structure:

(1) That the compensation act become operative only at the end of the voyage, so as to preserve to the seamen the right of wages to the end of the voyage;

(2) That the benefit payments during the period of temporary disability be not less than the allowance for maintenance and cure; and

(3) That the wage base for computation of the benefit rate be predicated on full employment for 12 months of the year, even though seamen averaged only about 8½.

It was also suggested that there be no waiting period for benefits and that there be no limitation on total compensation payable for disability and death.

Unfortunately, the time available to the Interdepartmental Committee was insufficient to permit evaluation of the reported cases under the system it recommended. That task was undertaken subsequently, although it suffered considerable delay because of the urgency of war activities. But now that World War II is over, it seems pertinent to focus attention on this problem again.

As these findings have an important bearing on the problem, brief mention of the steps used in the evaluation process are appropriate. The benefit rate was computed at 66-2/3 percent of the full-time annual wage together with the value of subsistence, lodging, overtime, and bonuses. The benefit rate therefore was based on earnings during the period of employment directly preceding the disability. To this amount was added the monthly value of subsistence and lodging established for purposes of the Social Security Act: $48 for licensed officers and supervisory personnel, and $36 for all other members of the crew.

The benefit-rate formula recommended by the Interdepartmental Committee was used--no limitations on total benefits payable for death or disability, and the benefit payments during the out-patient and convalescence period at least equal to the current payments for maintenance. The same method was used to compute benefits during the hospitalization period, for which nothing is payable under the present employer liability system.

Payments for death and permanent impairments were predicated on the same benefit base. For permanent total disabilities the benefit period was computed at the full life expectancy of the disabled seaman. For permanent partial disabilities, the schedule of specified weeks provided in the Longshoremen's and Harbor Workers' Act was used. Similarly, benefits payable to dependents of fatally injured seamen were calculated on the basis set forth in this act, except that for benefits the minimum used was $14 per week, and the maximum $28, rather than the smaller amounts specified in the act. No correction was made for the remarriage of widows.

How adequate are the minimum standards proposed by the Interdepartmental Committee in comparison with amounts paid under the present system? Although present-day earnings of seamen are different from what they were in 1938, the prewar year studied by the Committee, a comparison of actual payments for disabilities in that year with the amounts payable under the modified compensation system provides a fair comparison of the relative pecuniary advantages and disadvantages of the two systems.

The comparison, shown in Table 2, covers 5,812 cases for which data were adequate for comparison.

Table 2 - Comparison of Probable Awards with Actual Net Recoveries, by Extent of Disability
(Cases Reported Closed, 1938)

Type and extent of disability	Number of cases	Probable award	Net recovery	Difference 1/		
				Amount	Average	Percent of net recovery
All cases	5,812	$2,197,805	$1,637,281	$560,524	$96.45	34.2
Injury	3,957	1,426,362	1,326,067	100,295	25.35	7.6
Disease	1,855	771,443	311,214	460,229	248.10	147.8
Fatal	139	735,744	216,987	518,757	3,732.06	239.1
Injury	71	454,667	199,121	255,546	3,599.24	127.8
Disease	68	281,077	17,866	263,211	3,870.75	1473.0
Permanent total	21	225,053	73,792	151,261	7,202.90	205.0
Injury	9	69,736	46,552	23,184	2,576.00	49.8
Disease	12	155,317	27,240	128,077	10,673.08	470.2
Permanent partial	224	426,682	437,437	-10,755	- 48.01	- 2.5
Injury	208	377,257	423,865	-46,608	- 224.07	-11.0
Disease	16	49,425	13,572	35,853	2,240.80	264.2
Temporary total	5,428	810,326	909,065	- 98,739	- 18.19	-10.9
Injury	3,669	524,702	656,529	-131,827	- 35.93	-20.1
Disease	1,759	285,624	282,536	33,088	18.81	13.1

1/ Unless indicated by (-) minus signs, the differences indicate gains over the net recoveries.

The "net recovery" figures are net amounts received by seamen after the deduction of attorney and court costs where these were incurred. It was assumed that there would be no such costs under the compensation act. The total amount actually paid by shipowners was $1,977,195. The total net amount retained by seamen was $1,637,281. It will be noted that in terms of total payments by shipowners, the total amount payable under the proposed act would be $2,197,805--about 10 percent more than the amount actually paid out by the shipowners.

Table 2 reveals clearly that cases involving fatalities and permanent total disabilities would fare much better under the compensation act. On the average, each fatality and permanent total disability would be paid more than twice the amount actually paid. These two types of cases, although constituting only 160 out of 5,812, or less than 3 percent, accounted for nearly $961,000, or about 44 percent of the total.

The permanent partial impairment cases would not fare quite as well under the proposed compensation system. On the average, benefit payments would fall 2.5 percent below present net recoveries. The difference was much sharper for temporary total disability cases. Here compensation benefits would fall 10.9 percent short of the total amount paid under the present system. Although the total sum payable for this type of disability was less than that for fatalities and permanent total disabilities, the number of persons involved was 5,428, or 93 percent of the total. Thus, on the average, death and permanent total disabilities would gain, and permanent partial and temporary total disabilities would lose under the proposed compensation system.

Although this comparison deals with total amounts and with averages, the study did permit a more detailed analysis of the distribution of seamen who would lose or gain under the proposed system. The latter comparison is shown in Table 3.

Table 3 - Cases Gaining Versus Cases Losing Under a Proposed Workmen's Compensation Law, by Extent of Disability (Cases Reported Closed, 1938)

Extent of disability	All cases	Cases in which workmen's compensation as compared with employers' liability would have resulted in--					
		Gain		Loss		Neither gain nor loss	
		Number	Percent	Number	Percent	Number	Percent
All cases	5,812	2,680	46.1	2,868	49.3	264	4.6
Injury	3,957	1,653	41.8	2,161	54.6	143	3.6
Disease	1,855	1,027	55.4	707	38.1	121	6.5
Fatal	139	129	92.8	10	7.2	0	0
Injury	71	61	85.9	10	13.1	0	0
Disease	68	68	100.0	0	0	0	0
Permanent total	21	21	100.0	0	0	0	0
Injury	9	9	100.0	0	0	0	0
Disease	12	12	100.0	0	0	0	0
Permanent partial	224	131	58.5	92	41.1	1	.4
Injury	208	115	55.3	92	44.0	1	.5
Disease	16	16	100.0	0	0	0	0
Temporary total	5,428	2,399	44.2	2,766	51.0	263	4.8
Injury	3,669	1,468	40.0	2,059	56.1	142	3.9
Disease	1,759	931	52.9	707	40.2	121	6.9

About 46 percent of disabled seamen would have been better off under the proposed compensation system. About 49 percent would have been worse off, and about 5 percent would not have been affected either way. Nearly 86 percent of

the death cases, and every permanent total disability case, would have gained under the present system; but 41 percent of the permanently partially disabled seamen would have been worse off, as would 51 percent of all those temporarily disabled.

From a purely financial consideration, therefore, about half of the seamen would be paid less under the suggested compensation system. Most of these seamen, however, were those who suffered temporary disabilities. On the other hand, the death and permanent total disability cases appear to have been greatly undercompensated under the present system. They would have received enough more in compensation to lift the total amount payable to disabled seamen under the proposed system about 10 percent above that actually paid by the shipowners.

Thus, disabled seamen as a group would have received more, but about half would have received less under workmen's compensation.

The explanation for this lies in the fact that the proposed compensation system cannot make up the amounts paid as indemnity to temporarily disabled seamen. As already pointed out, the proposed system matches the present system for wages to the end of the voyage and payments for maintenance and cure. It adds payments for the hospitalization period, which is not compensated under the existing system. But this amount fails to match the average amount paid as indemnity for suffering and pain, and for which no allowance is made under workmen's compensation, which is predicated on a partial offset for wage loss.

There are, however, intangible benefits under a workmen's compensation system, as the Interdepartmental Committee pointed out. First, it provides a definite and quick way of ascertaining the amount due a disabled seaman. It provides a definite and certain benefit scale in contradistinction to recoveries determined by the uncertainty of damage suits or negotiated settlements. Further, workmen's compensation eliminates the controversial elements of negligence and assumption of risk and reduces the contest between seamen and shipowner to a minimum. It avoids costly and cumbersome court procedures and much of the bitterness usually engendered in these suits. It provides regular periodic compensation payments in lieu of a single lump-sum settlement payment, "thus protecting the recipients from improvidence."

CONCLUSIONS: The probable results of the application of the type of liberal workmen's compensation act proposed by the Interdepartmental Committee may be summarized as follows:

1. The total amount which seamen, as a group, would receive for disabling injuries and diseases probably would be in excess of what they receive under the present limited employer liability system. A workmen's compensation system modeled along the proposed lines would cost the shipowners about 10 percent more.

2. As is true of workmen's compensation systems generally, litigation would be curtailed greatly. Because benefit payments are stipulated in considerable detail and the question of fault is immaterial, there would be less tendency on the part of shipowners to evade liability and on the part of seamen to get as much as they could. It is likely, too, that industrial relations would be improved.

3. Shipowners might be encouraged to engage in accident prevention to a greater extent than they now do if the law contained penalty provisions--such as a fixed percent of additional compensation if a prescribed safety rule had been violated by the shipowner or his agent. Such a provision is contained, for example, in the Workmen's Compensation Act of Wisconsin.

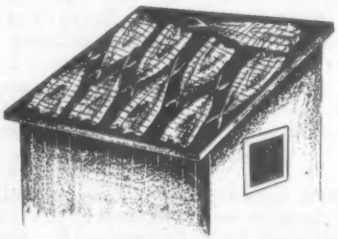
4. The proposed act would compensate cases of death and permanent total disability far more adequately than is now the case. On the other hand, the majority of temporarily disabled seamen would receive less.

5. About half of all disabled seamen would receive less under the proposed compensation system than they do now, because this system does not offset the present "indemnity" payment for pain and suffering. The basic philosophy of workmen's compensation is to offset in part--usually two-thirds up to a prescribed maximum--the wage loss of the disabled worker.

6. The adoption of the proposed compensation system would increase the average payment to dependents of fatally injured or diseased and to severely disabled seamen at the expense of the less severely disabled.

DRY-SALTING MULLET, RED DRUM, AND KING MACKEREL

Mullet, mullet roe, red drum (channel bass), and kingfish (king mackerel) are about the only fish dry-salted commercially in the South Atlantic and Gulf of Mexico areas. Of these, mullet is most important. The latest available data show a production of 1,749,500 pounds of salted mullet in 1940. The largest share of this was prepared on the west coast of Florida, the second largest amount in North Carolina, and the smallest in South Carolina and Alabama.



Fishery Leaflet 136, which may be obtained, free of charge, from the Fish and Wildlife Service, Chicago 54, Illinois, describes the preparation and methods of arranging these species for dry-salting. Directions are also given for dry-salting mullet roe, of which about 80,000 to 150,000 pounds are prepared commercially each year in the United States.

TECHNOLOGICAL RESEARCH IN SERVICE LABORATORIES

JULY 1946

Seattle, Wash.

The utilization of Pacific rockfish was studied with the purpose of developing suitable recipes and better canning procedures.

The laboratory cooperated with the Association of Official Agricultural Chemists in improving the method of determining the oil content of fish meals.

Tests are being run on the effect of storage on the vitamin A content of grayfish livers. Preliminary work indicates that the destruction of the vitamin may be fairly slow.

Boston, Mass.

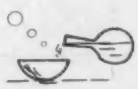
Two experiments were carried out in cooperation with the University of Maine on the use of high-voltage smoke precipitation apparatus for rapid smoking of sardines. These preliminary experiments indicate that it may be possible to smoke sardines sufficiently for use in canning with an exposure time of about 5 seconds. The consequent saving in time and handling may be an important factor in increasing the pack of smoked sardines, if the method can be perfected.

Two types of specially-treated steel rings are being tested for corrosion resistance to determine their suitability for use in lobster pots.

While the mobile laboratory was stationed at New Bedford, the staff conducted a preliminary survey of the sanitation problems of the fishery industry of that city.

A lecture on fishery technological research was presented at the Quartermaster Subsistence School in Chicago to a group of Army officers who are being assigned to post-graduate study at various universities. Assistance was given in drawing up a course of study on fish and fishery products.

The work of the laboratory was discussed in broadcasts over WHDH on July 17 and 18.



College Park, Md.

The monthly examination of frozen packaged oysters showed that they were all of excellent quality after four months' storage. The pH values had decreased only slightly.

On July 22, an experimental shipment of fresh red snapper steaks and frozen shrimp cocktail was flown from St. Petersburg, Florida, to Newark, N. J., in a DC-3 cargo plane of a commercial airline. The red snapper steaks were packed in commercially available corrugated cardboard containers, while the shrimp cocktail was maintained at 3° F. by use of individual frozen food type packages, which were in turn packed with dry ice inside a non-rigid bag of 2-inch thick fiber glass. Both products were landed in excellent condition after an 8-hour flight.

A demonstration of the packaging of frozen foods was presented to a conservation class from the University of Maryland. Forty-nine Army officers were given two days of instruction at the Chicago Quartermaster Subsistence School on the use of fishery products.

Two rat-feeding studies were initiated, one to test the effects of certain kelp products in the diet and the other to determine the thiamine (vitamin B_1) content of canned Maine sardines.

The thiamine assay will be compared with results obtained by chemical methods. Similar thiamine determinations are being run on rockfish, salmon, and tuna.

After four months, the experiments to test the effects of DDT in the diets of laying hens were concluded. At the two highest levels used there was some decrease in egg production, but there were no other outward manifestations that could be attributed to the insecticide. Studies of the data and of histological specimens will be continued.

Classification tests were run on 54 different bacteria isolated from fish. Their generic position has been determined, and work is under way to determine their species. Fifteen cultures of bacteria isolated at the Mayaguez Laboratory from a sample suspected of causing fish poisoning are being identified and classified.

Continuing experiments in the treatment of menhaden oil indicated that the polymerization of refined, bleached oil by blowing with oxygen was catalyzed by metallic driers but not by organic peroxides. The metallic driers generally produce a dark oil in proportion to their effect in speeding up the reaction; however, a light oil was obtained when it was blown with oxygen at a low temperature in the presence of cobalt drier.

Methods are being devised for the preparation of pet foods with a base of Lake Erie burbot. The products were analyzed for various nutritive components.

The mobile laboratory was stationed at Crisfield, Maryland, during the month and the staff undertook bacteriological studies of the adjacent tide waters.

FRESH AND FROZEN FISH

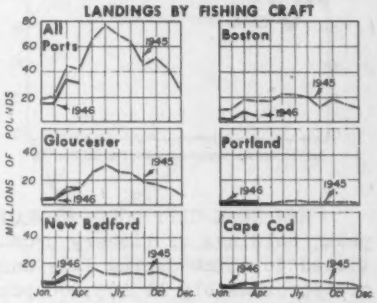
New England

LANDINGS: Landings by fishing craft at Boston, Gloucester, and New Bedford during July were 8 percent less than landings in June despite the fact that several powerful craft, either new or reconverted from war duty, were added to the fishing fleet, according to the Service's Market News Office at Boston.

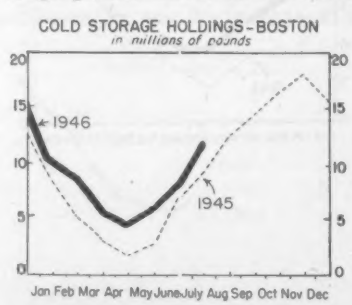
The landings of scrod haddock have been unusually low for the last 3 years. The mackerel catch fluctuated during the month and showed evidence of scattered small schools of large fish, which is typical of this fishery following several years of good fishing. Swordfish landings per boat declined considerably compared with those of 1945.

July prices for first grade stock averaged from 2 to 5 cents higher than the old OPA ceilings for species such as haddock, cod, rosefish, and flounders, with prices for second grade fish closely approaching the old ceiling prices. Items such as swordfish and scallops averaged 10-20 cents higher than the former ceilings.

LANDINGS: Landings by fishing craft during April at Boston, Gloucester, New Bedford, Portland, and ports on Cape Cod totaled 30,559,000 pounds--a decrease of 23 percent in quantity landed as compared with April 1945. Total landings during the first 4 months of 1946 amounted to 93,875,000 pounds compared with 124,331,000 pounds landed during the corresponding period of 1945. Only 18.1 million pounds were landed at Boston during the 4-month period compared with 54.4 million pounds for these months in 1945, according to the Service's Current Fishery Statistics No. 277.



BOSTON COLD-STORAGE HOLDINGS: Holdings of fishery products in Boston cold-storage plants increased about 85 percent during July, according to the Service's Market News Office in that city. Some of the plants reported near capacity stocks. Holdings on July 31 were 50 percent above those of July 31, 1945. Stocks of all important items produced in the area increased during July, with 85 percent of the increase being accounted for by rosefish and haddock fillets, whiting, and sea scallops.

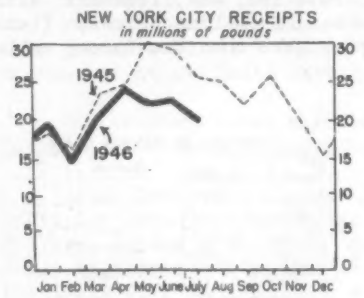


Ex-vessel prices remained high throughout the month, the processors being confident that fall and winter demand would be adequate to move stocks. The prospect of the return of OPA ceiling prices on land meats was contributing to this confidence.

In recent years there has been a trend toward the marketing of a greater and greater proportion of frozen fishery items. This trend makes it difficult to judge the significance of the difference between today's holdings and those of the past. Assuming that the market for many millions of pounds of fish formerly marketed fresh, smoked, or salted is being absorbed by frozen products, and granting a moderate increase in demand due to increased population, it seems possible that freezer capacity may be even now inadequate to handle the entire supply needed to satisfy the public demand.

Middle Atlantic

NEW YORK CITY RECEIPTS: Landings and receipts of fresh and frozen fishery products in New York City during July totaled 20,300,000 pounds. This was a decline of 8 percent compared with the June receipts and was 29 percent less than July 1945, according to the Service's local Market News Office.

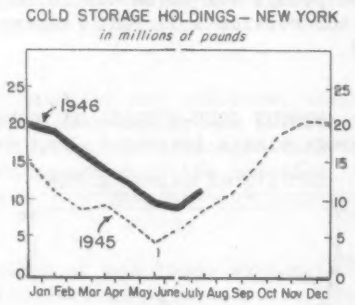


Fish receipts during the month declined about 12 percent compared with those in June. The leading items were flounders, haddock, cod, scup, mackerel, whiting, halibut, and salmon.

Shellfish receipts in July increased 2 percent compared with June, shrimp being largely responsible for the increase.

NEW YORK CITY COLD-STORAGE HOLDINGS: With fish production almost at its peak, holdings of fishery products in New York City cold-storage warehouses continued to climb during July and reached a total of approximately 11,495,000 pounds on August 1. This was an increase of 22 percent compared with July 1 and 27 percent above August 1, 1945.

The greatest activity in the cold-storage movement centered on cod fillets, halibut, mackerel, sablefish, and salmon among the salt-water species; ciscoes and whitefish among the fresh-water species; and lobsters, scallops, and shrimp among the shellfish. These were the leading items also in stocks held.



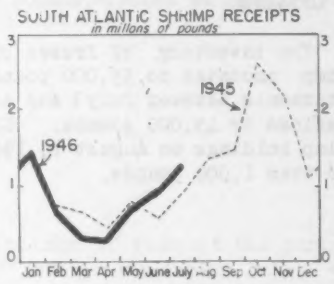
Chesapeake

PRODUCTION: Production in the Hampton Roads area during July amounted to 2,790,000 pounds, an increase of 517,000 pounds compared with June, according to the Service's Market News Office at Hampton. Of the total production, 1,799,000 pounds were croakers and 707,000 pounds gray trout. Fishermen reportedly were disappointed in the size of the croaker catch during this summer season and dealers said they can't recall a croaker season as poor in recent years.

Production of crabmeat increased in the Chesapeake Bay area from 249,000 pounds in June to 265,000 pounds in July. The production of hard shell crabs has been good throughout the summer, but the catch of soft shell crabs has declined slightly in the Crisfield area.

South Atlantic

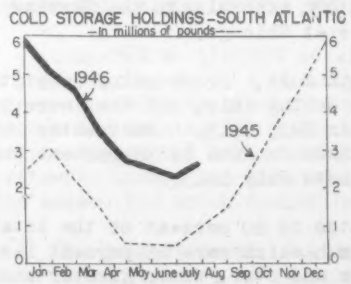
RECEIPTS: Shrimp production for Florida and the South Atlantic States during July amounted to 1,255,000 pounds (heads off). This represented an increase of 33 percent over June and was 38 percent above the July 1945 production, according to the Service's Market News Office at Jacksonville. Florida landings were less than those in July 1945, while landings in Georgia and South Carolina were much greater.



No appreciable quantity of shrimp from the Gulf was landed in Florida during the month.

There was a gradual decrease of shrimp wholesale prices during July. The price during the first part of the month ranged from 40 to 63 cents per pound; and during the last of the month from 20 to 48 cents per pound, according to size f.o.b. producing point.

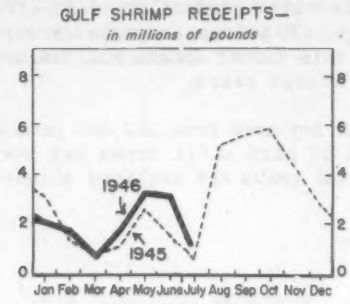
COLD-STORAGE HOLDINGS: Holdings of fishery products in 5 major cold-storage warehouses in the South Atlantic States amounted to 2,780,000 pounds on August 1, according to the Service's Market News Office at Jacksonville. This was an increase of 364,000 pounds over holdings on July 1 and exceeded the inventory on August 1, 1945 by 1,781,000 pounds.



Fish and shellfish stocks increased 349,000 pounds and 16,000 pounds respectively, during July. A large increase in the holdings of rosefish fillets accounted for most of the rise in fish stocks. Holdings of mullet and grouper also showed an increase, while Spanish mackerel declined. The consignment of scallops and shrimp to cold-storage during the month was responsible for the increase in shellfish holdings.

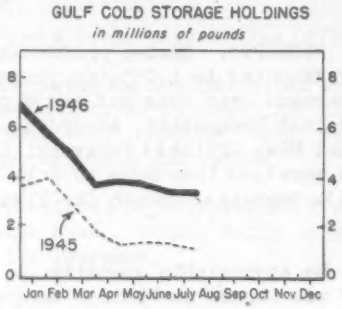
Gulf

PRODUCTION: Shrimp production in the Gulf area totaled 9,510 barrels in July, less than one-half of the quantity landed in June and almost double the production for July 1945, according to the Service's Market News Office at New Orleans. The July production compares favorably with the 5-year average of 10,669 barrels for that month.



Larger shrimp landings in Texas during the month were largely responsible for the increase in total Gulf production for July, although a slight increase was noted in landings in Mississippi and Louisiana also. The closed season on the taking of shrimp in the Gulf to the 18-foot depth ends on August 12.

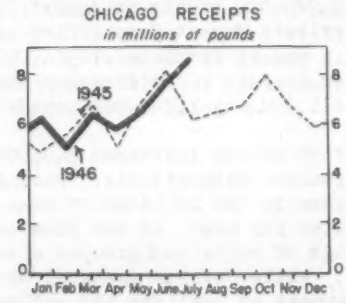
COLD-STORAGE HOLDINGS: Holdings of shrimp in 9 cold-storage warehouses in the Gulf area amounted to 990,000 pounds on August 1, 14 percent less than holdings on July 1, but twice as large as stocks on August 1, 1945, according to the Service's Market News Office at New Orleans.



The inventory of frozen cooked and peeled shrimp amounted to 55,000 pounds on August 1. Withdrawals between July 1 and August 1 exceeded freezings by 45,000 pounds. Cooked and peeled shrimp holdings on August 1, 1945, amounted to less than 1,000 pounds.

Great Lakes

CHICAGO RECEIPTS: Receipts of fresh and frozen fishery products in the Chicago wholesale fish market during July totaled 8,490,000 pounds. This was an increase of 9 percent as compared with June and 33 percent greater than July 1945, according to the Service's Market News Office at Chicago.

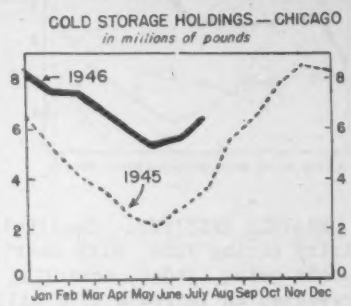


Compared with June, fresh-water receipts dropped 5 percent during July, but they were 13 percent higher than July 1945. Salt-water receipts exceeded those in June by 38 percent and were 48 percent above July 1945.

Shrimp amounted to 80 percent of the total shellfish receipts, which were 25 percent less than those in June and over 4 times greater than shellfish receipts in July 1945.

Dealers in halibut had difficulty adjusting their trade to the removal of price ceilings on June 30, the discontinuance of the halibut allocation program on July 22, and the restoration of price ceilings on July 25.

CHICAGO COLD-STORAGE HOLDINGS: Total holdings of fishery products in Chicago cold-storage warehouses on July 31 amounted to 6,417,000 pounds. This represented an increase of 12 percent over holdings on July 3 and was 50 percent greater than stocks on August 2, 1945, according to the Service's Market News Office at Chicago.



Of the total holdings, fresh-water species amounted to 2,102,000 pounds; salt-water varieties, 3,502,000 pounds; and shellfish, of which the greater part was shrimp, 814,000 pounds.

The increase in cold-storage stocks was not the result of large current freezings, rather it was the result of curtailed withdrawals due to the lack of demand. Smaller receipts of fresh-water species, and the freezing of larger amounts of salmon and halibut at Pacific Coast ports kept local holdings down during the month of normally large production.

Holdings of halibut on July 31 totaled 464,000 pounds, frozen salmon, 177,000 pounds, and frozen fillets, 1,857,000 pounds.

Pacific

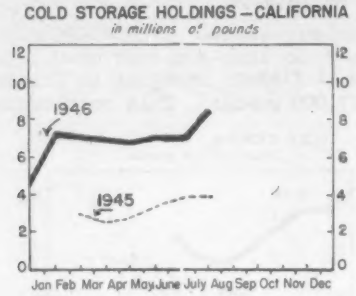
RECEIPTS AT SOUTHERN CALIFORNIA PORTS: Landings of fish at the ports of Santa Monica, San Diego, and San Pedro totaled 537,000 pounds during July. Continued labor controversies at San Pedro during June barred all fishing operations in that area, with the result that no landing figures were available for comparison in July, according to the Service's Market News Office at San Pedro.

Landings of barracuda, California halibut, kingfish, mackerel, sculpin, white sea bass, bluefin tuna, and yellowtail for the 3 ports combined were larger than in May. These increases were normal, however, as the season for these species opened full scale in June and continued through July.

Compared to 410,000 pounds landed in June, the San Diego fishery declined sharply during July, with only 93,000 pounds received. The greatest single decrease occurred in the catch of barracuda. Diversion of fishing efforts to albacore for canning was reported to be a major factor in this reduction of the barracuda catch. Other marked decreases were noted in landings of mackerel and yellowfin tuna. The greatest increase was displayed in landings of swordfish, the season for which opened in July.

The Newport Beach landings of 302,000 pounds during July compared favorably with those for June of 234,000 pounds. Previous to June 18 reports had not been received from this district.

CALIFORNIA COLD-STORAGE HOLDINGS: Holdings of fishery products in California cold-storage plants on August 1 amounted to 8,225,000 pounds. This was 24 percent above holdings on July 1 and 106 percent over August 1, 1945, according to the Service's Market News Office at San Pedro.

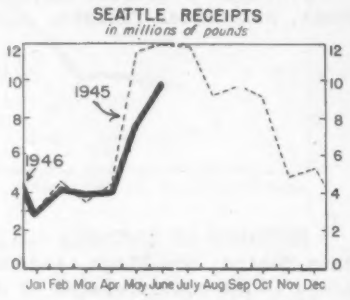


Sizable increases were recorded in July in the freezings of flounder fillets, unclassified fillets, and halibut.

Shrimp holdings were 1½ million pounds greater on August 1 than on the corresponding date in 1945.

SEATTLE RECEIPTS: Seattle's waterfront showed comparatively heavy fishery activity during June, with nearly 10 million pounds of fresh and frozen fishery products being landed, according to the Service's local Market News Office. This represented an increase of 2 million pounds over May's receipts but a decline of 17 percent compared to the June 1945 figure of almost 12 million pounds.

Delivery of halibut was exceptionally heavy, accounting for approximately 45 percent of all receipts. The halibut catches in Area II were so much heavier than normal that the quota was reached and the area subsequently closed on June 11, one of the earliest closing dates on record.



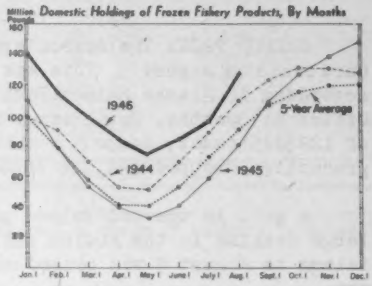
Salmon trolling operations in the upper Straits of Juan de Fuca and off Cape Flattery showed considerable improvement during the month. Local landings alone totaled 590,000 pounds, consisting mostly of king and silver salmon. This was more than double the arrivals for May. However, it was generally thought that the salmon runs, which were indicating a late migration in practically all areas, would prove disappointing to packers since they would not reach peak migration until many areas had been closed to fishing. Total salmon receipts, including coastwise shipments from Alaska and imports from Canada, were well over a million pounds.

The local otter-trawl fleet produced almost 2½ million pounds of groundfish in 154 trips to the banks. The greatest fishing effort was expended toward the catching of Petrale sole and lingcod. Fishing for rockfishes and true cod was kept at a minimum.

Receipts from local sources totaled 8,343,000 pounds; those from Alaska, 770,000 pounds; and Canadian imports, 804,000 pounds. Fresh fishery products from all sources amounted to 8,877,000 pounds, and frozen, 1,041,000 pounds.

United States

UNITED STATES COLD-STORAGE FREEZINGS AND HOLDINGS: Stocks of frozen fish and shellfish in United States public cold-storage plants increased 29,031,000 pounds during July and on August 1 totaled 126,837,000 pounds, according to the Service's Current Fishery Statistics No. 281. This was 58 percent above holdings on August 1, 1945, and 39 percent above the 5-year average for the date.



Freezings of fishery products in domestic cold-storage plants, totaling 43,270,000 pounds during July, were only about 1 percent more than the production in July 1945, but were 13 percent higher than those of the previous month. The total for the first seven months of 1946 amounted to 151,887,000 pounds, compared with 138,847,000 pounds frozen during the corresponding period of 1945.

THE MIDDLE WEST FISHERY

The fishery resources of the Middle West yield more than 140 million pounds of food a year. This figure represents only the commercial catch. To it must be added the large but unknown poundage taken by the sportsman and by the hook-and-line fisherman who brings in a string of perch or crappie for his family's dinner. Another unmeasured but substantial crop comes from the private ponds where farmers raise sunfish, bass, and other fish as a side line to their corn, hogs, wheat, and cattle.

Being widely distributed throughout the region, this food crop of mid-western waters makes only modest demands on our transportation system, for almost every community has a fish supply of some sort within the range of a short truck haul.

--Conservation Bulletin No. 34

CANNED AND CURED FISH

Salmon

SALMON PACK: The season's pack of Alaska canned salmon reached 1,827,746 standard cases on August 3. This was 1,033,557 cases below production on August 4, 1945, according to Alaska Salmon Pack Report No. 7, issued by the Service's Market News Office at Seattle. Total cases of canned red salmon showed a decline for the season of 128,825 cases, compared with the 1945 season to August 4, while pink salmon production dropped 662,726 cases and chum salmon fell 231,349 cases.

A gain in the red salmon pack in the Chignik area was more than offset by a large decline in the Kodiak run; while the reduction in the pack of pink and chum salmon to August 3 was caused mainly by low production in the Prince William Sound area.

Alaska Salmon Pack to and including August 3, 1946

District	Red	Pink	Chum	Coho	King	Total
Western	646,944	4,039	36,948	1,478	5,055	694,464
Central	302,490	412,787	147,467	52,927	24,384	940,055
Southeastern	33,568	53,496	86,137	18,467	1,559	193,227
Total 1946, August 3	983,002	470,322	270,552	72,872	30,998	1,827,746
All districts--						
1945, August 4	1,111,827	1,133,048	501,901	77,727	36,800	2,861,303
1944, August 5	1,478,443	910,382	626,561	72,543	33,408	3,121,337
5-year average, August 3	1,248,833	893,043	485,908	76,411	37,276	2,741,471
Total pack, 1945	1,168,615	2,212,941	680,168	204,054	37,117	4,302,895
" " , 1944	1,581,416	2,092,632	994,487	187,499	37,025	4,893,059
5-year average	1,362,352	2,816,637	847,780	256,428	43,229	5,326,426

Tuna and Mackerel

TUNA AND PACIFIC MACKEREL PACK: The production of canned tuna by California packers during July totaled 707,374 standard cases according to the California Division of Fish and Game. This was only 383 standard cases more than the June pack but was 69 percent above the production in July 1945. The total pack during the first 7 months of 1946 amounted to 2,656,850 standard cases, 49 percent above the production for the corresponding period in 1945. In both the July and 7-month production, the pack of every species was greater in 1946 than in 1945. The pack of tuna flakes was higher, too, but there was no production of tonno style during the first 7 months of 1946.

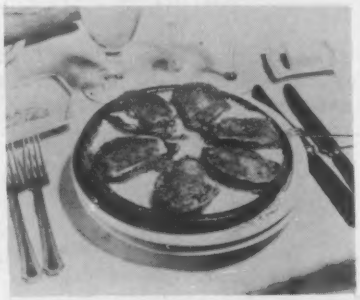
There was no production of canned mackerel during July and only 22 cases were packed during July 1945. The 7-month pack of 54,909 standard cases was 10 percent below the pack for the corresponding months in 1945.

California Pack of Tuna and Mackerel--Standard Cases*

Item	July 1946	June 1946	July 1945	Seven mos. ending with July-- 1946	1945
	Cases	Cases	Cases	Cases	Cases
Tuna:					
Albacore	174,401	8,161	86,807	182,587	88,255
Bonito	210	789	80	5,249	2,001
Bluefin	76,458	89,586	48,720	236,658	180,816
Striped	74,197	64,687	22,612	242,801	104,865
Yellowfin	213,275	384,078	143,935	1,410,100	892,047
Yellowtail	2,893	1,322	174	27,430	1,153
Flakes	165,940	158,368	102,844	552,025	501,083
Tonno style	-	-	14,180	-	16,198
Total	707,374	706,991	419,352	2,656,850	1,786,418
Mackerel	-	1,196	22	54,909	61,072

*Standard cases of tuna represent cases of 48 7-ounce cans, while those of mackerel represent cases of 48 1-pound cans.

OYSTERS a la ROCKEFELLER



3 doz. large oysters in the shell
½ lb. bacon, sliced thin
Bread crumbs
Paprika

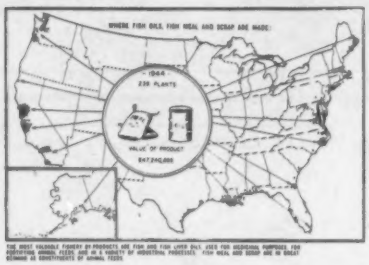
Wash oyster shells thoroughly. Open oysters, discarding the flatter shell. Separate oysters from the curved shell, but allow each to remain loosely in the shell. Cover oysters with bread crumbs and season with paprika, cover each oyster with bacon, place oysters (in their shells) in one layer under a broiler flame until the bacon is cooked through. Serve oysters in the shells.

--Fishery Circular No. 21

FISHERY BYPRODUCTS

Oil and Meal

PRODUCTION: The production of fish oils during June totaled 1,771,108 gallons, an increase of 16 percent compared with June 1945. This brought the total for the half-year period to 2,605,867 gallons compared with 2,920,392 gallons during the first six months of 1945, according to the Service's Current Fishery Statistics No. 286.

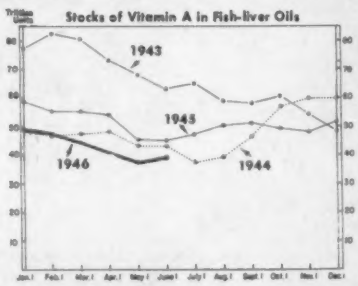


Complete data are not available on meal and scrap, but items which normally account for about 94 percent of the total production show an output of 19,849 tons during June, 166 tons more than in June 1945. The 6-month total--41,238 tons--was 15 percent below the corresponding period for 1945.

Menhaden oil and meal were the chief products for June, accounting for 70 percent and 68 percent, respectively, of the total productions. The pilchard reduction plants, inactive since March, resume operations in August.

Vitamin A

STOCKS AND PRODUCTION: U.S. stocks of vitamin A in fish-liver oil on June 1 were reported at 38.4 trillion units, an increase of 2 percent above stocks held on May 1 but 15 percent less than those of June 1, 1945, according to the Service's Current Fishery Statistics No. 284.



Production of vitamin A during May totaled 5.0 trillion units compared with 5.2 trillion units produced during May 1945. Total production during the first five months of 1946 amounted to 21.8 trillion units as compared with 21.6 trillion units produced during the corresponding period of 1945.

Receipts of livers during May totaled 1,475,000 pounds containing about 5.5 trillion units of vitamin A. During the same month of 1945, 2,032,000 pounds of livers, having a vitamin A content of 8.0 trillion units, were received.

OTHER FISHERY NOTES

The American Trade Proposals: Restrictive Business Practices 1/

INTRODUCTION: The characteristics of international cartels and their growth during the inter-war period have been the subject of numerous private and official inquiries which, since 1939, have been substantially augmented in the United States by governmental investigations and judicial proceedings. The purpose of this article is to discuss the bearing of this extensive body of information, in some of its aspects, upon international commercial policy, with particular reference to the proposals concerning restrictive business practices set forth in the Proposals for Expansion of World Trade and Employment (Department of State Publication 2411).

Considered as a whole, the information and analysis now available disclose as of 1939 the cumulative spread of a network of restrictive business arrangements and practices affecting a substantial proportion of all international trade in economic goods, including industrial technology. Individual fields of production and trade were not, of course, equally or invariably subjected to such restrictions, nor were all arrangements of uniform durability and effectiveness. Nevertheless, the significance of this development with reference to international commercial policy is clear and unmistakable: On the eve of the outbreak of the recent war the cartelization of world trade had reached proportions sufficient to threaten the international economic processes of competition which underlie the multilateral system of world trade and which have been significantly responsible for its development in the past several centuries of unrivaled material progress. The United Nations consequently face today an urgent problem whose solution is related to the success of efforts in other fields of economic and monetary policy; and the relation is clearly one of mutual interdependence. On the one hand, concerted action to curb the restrictive business of international cartels would be largely fruitless in the absence of complementary measures for reducing governmentally imposed barriers to trade and for the establishing of a multilateral system of international payments. On the other hand, the success of such measures depends upon the competitive character and vitality of the underlying processes of business and international trade.

EFFECTS OF INTERNATIONAL CARTELS: International cartels may be characterized, for purposes of this discussion, as arrangements between producers situated in two or more countries for the elimination or suppression of competition. Firms enter into cartels in order to obtain the advantages of monopolistic control expected to accrue in the form of higher prices and profits per unit of sales than

1/This article, by Mr. Robert P. Terrill, is reproduced in full from the March 24th issue of the Department of State Bulletin. A companion article appeared in the Commercial Fisheries Review, August 1946, pp. 23-27.

would otherwise be realized. In order to achieve this objective, cartels must succeed in restricting sales to a smaller quantity than would have prevailed in the absence of an agreement. This result is known in terms of the art as the "adjustment of supply to demand". More exactly, by concerted control of production and marketing--either or both--supply is "adjusted" to demand at a non-competitive price.

The forms assumed in practice by cartel arrangements are exceedingly varied, depending from agreement to agreement upon the characteristics of each industry within the various producing and consuming countries at any given time. Typically, however, a written agreement sets forth the various restraints which each party will undertake as to his producing and marketing activities, and provides for such ancillary matters as penalties. In an industry based upon technology subject to patents in various national jurisdictions, it is customary to agree upon licenses within given countries with respect to both existing and future patents coming under the control of the parties and, where relevant, to provide for the exchange of non-patentable or confidential information.

Cartel agreements are frequently reinforced by international combines which subject firms in different countries to unified control, principally through stock-ownership by a single concern. Such a concern is generally known as the "parent" and often takes the form of a holding company. International combines thus facilitate the negotiation and maintenance of cartel arrangements by reducing the number of contracting parties necessary to obtain effective control over an industry. In the revival of autarchic trade practices during the 1930's, private cartel agreements were also reinforced in some countries by governmental action to assign compulsory production or export quotas to firms within their respective national jurisdiction, and in some cases to assign import quotas to foreign concerns. Also, the simultaneous fixing of official quotas for a given product by two or more countries, in consultation with their respective industrial groups, sometimes accomplished the de facto results of an international cartel without its de jure organization.

The practices of international cartels are likewise extremely varied, and the adoption of a number of interrelated practices is typically required in cartel agreements. Certain agreements provide for the explicit fixing of price in some or all markets of the world, while others seek to accomplish this result indirectly by means of production or export quotas which in turn may be global in character or may pertain to particular national markets. The assignment of exclusive market areas to each of the cartel participants illustrates still another variant; by means of such allocations members are restricted to specified national territories with the object of insuring to each party exclusive possession of a given market area. If, as in some instances, unreserved or non-exclusive territories coexist, the members may agree on which firm shall act as the price "leader", or they may agree upon a common and exclusive sales agency or a division of exclusive customers.

The concerted boycott illustrates another type of restrictive business practice and is employed for the purpose of coercing "outside" sellers or buyers. In this instance a group of firms in the position of buyers or sellers with respect to "outsiders" refuses, or threatens to refuse, to do business with the latter unless certain conditions are accepted. For example, retail dealers have been faced with boycott by cartel groups unless they refrained from trading with independent producers seeking sales outlets. Concerted "dumping" in a given market is a related practice whose purpose is to preclude the future competition of outsiders or to prevent the establishment of new firms.

Concerted action to restrict access to technology has been required under exclusive arrangements for the pooling of future as well as existing patents in the control of a particular group of firms. In certain instances where the parties possess improvement and application patents as well as "basic" patents, the expiration of the latter is of no benefit to outside firms if they cannot have access on reasonable terms to patents relating to applications and improvements. In general, this type of restraint extends the combined monopoly powers of the parties beyond the legal grant of monopoly inherent in their patents at any given time. Firms in possession of patents, particularly those relating to general processes of production, may also divide or allocate fields of production through restrictive licensing agreements, each licensee being arbitrarily limited to a particular and different use of the process. Such an allocation of fields of production is not necessarily dependent, of course, upon the existence of patents; it may be achieved directly by agreement to such effect, or indirectly by agreed allocation of market areas or customers having different demand characteristics.

International cartel arrangements may affect economic welfare through monopolistic influences upon production and the distribution of income and upon the flow of international trade. The monopoly consequences of an international cartel agreement are similar to those induced by restriction on a purely domestic scale. The quantity of resources, including labor, used in the cartelized industry tends to be less than it would be under a non-restrictionist regime, although prices and profits per unit of output tend to be correspondingly greater. Resources used in competitive sectors of the economy earn smaller returns than would otherwise have been the case; and owing to collateral effects on the distribution of income, the volume of savings may be increased with respect to opportunities for new investment, thus resulting in a tendency toward chronic unemployment.

The monopolistic effects of cartels may also extend to the retardation and smothering of new techniques of production and innovations of management or marketing. It is a widely held opinion that the cartelization of an industry diminishes the incentives of firms to be enterprising and may, indeed, lead to the deliberate suppression of technology. The extent to which this proves to be the case in any given instance is, of course, exceedingly difficult to estimate, particularly over any short period of time, due to the lack of a suitable standard of reference.

The existence of political frontiers and diverse national economies greatly complicates the monopolistic effects of international cartels and introduces additional considerations, mainly with reference to the terms of trade between national states. International cartel agreements between producers situated in predominantly industrial countries may influence the terms of trade of such countries with less industrialized nations to the detriment of the welfare of the latter. If such restrictive arrangements are governmentally encouraged, political relations may likewise deteriorate and give rise to retaliatory action. If such action takes the form of cartelization of the export products of the less industrialized nations, the terms of trade of the latter may be restored; however, the total volume of world trade will be diminished, and the supply of international items entering into the standard of living will be correspondingly diminished.

Restrictive arrangements in a particular industry may also induce the growth of firms producing identical or substitute commodities in dependent consuming countries. If such expansion is sufficiently great, the cartel arrangement in question may ultimately break down with a drastic decline in price and accompany-

ing demands for governmental measures to protect the newly created productive capacity regardless of comparative costs. Similarly, as a preliminary to the negotiation or renewal of cartel agreements, producers situated in a given country may demand, or threaten to demand, a protective tariff or other governmental trade barriers for the purpose of increasing their "bargaining power" by eliminating their domestic market as an object in the cartel negotiations. The monopoly effects of international cartels are thus closely related to the subject of trade barriers.

Although it is perhaps true that international cartels, through private quota arrangements, have on occasion forestalled the enactment of governmental import regulations, it should also be noted that the cartel participants in such cases derive, at least in part, returns which would otherwise have accrued to the public treasury in the form of import duties or proceeds from the sale of import licenses. Furthermore, if markets are exclusively allocated under a cartel arrangement, the effect is tantamount to an absolute prohibition of imports. A cartel can thus be more drastic in its restrictive effects than an official quota or tariff and even when less restrictive will result in a loss of revenue that would otherwise accrue to the public treasury. In the case of states which are wholly or mainly dependent upon foreign sources of supply an additional consideration is relevant, namely, the burden of being arbitrarily denied the right to purchase from the cheapest seller and thus to obtain the advantages of competition. This effect of cartel control is of importance since almost all countries, because of natural or economic circumstances, are highly dependent upon certain imports.

The effect of concerted and inequitable restraints upon access to new industrial technology has been less widely noted but is, nevertheless, of importance. Cartel arrangements in the field of technology may not only retard the growth and improvement of an industry but may also frustrate the greatest potential use of the growing international fund of scientific knowledge which provides the basis for subsequent technological developments and which is truly a common world possession. In this connection, however, it should be emphasized that the development of new industrial technology is necessarily costly and time consuming, and frequently entails high risks of failure on the part of individual firms. The prospect of adequate monetary returns is therefore essential to sustain this important function of enterprise in every country. An effective world system of national patent grants with proper scope for cooperation among governments is indispensable to the continued development and wide international dissemination of industrial technology.

CONSIDERATIONS OF POLICY: Certain popular statements which present the differences of national policies toward international cartels in sharp contrasts of black and white may easily be misleading. In the first place, individual governmental policies concerning cartels have not, with few exceptions, been subject to clear and definitive expression. General inferences in this matter are frequently drawn from special situations prevailing in the late 1930's or from some particular provision of national legislation that may not adequately reflect the general body of national statutes bearing upon the subject. For example, although a country may have no general legislation against restraint of trade, it may as in some states have certain "antitrust" provisions written into its patent or trade-mark laws. Consequently, it would perhaps be more accurate to emphasize the extreme complexity of this legislative field and to draw attention to the shadings of emphasis on matters treated in the various national systems.

Secondly, pre-war attitudes, while of course relevant to post-war policies, are not necessarily determinative in full measure, particularly with reference

to restrictive business practices of an international character. The national legislation of most countries, including those which presume the legality of monopolistic combinations, was, generally speaking, conceived before the recent growth of international arrangements and was framed primarily with reference to domestic market relations. Since unilateral action, particularly on the part of smaller states, would have been hopelessly inadequate to curb restrictive business practices of an international character, previous legislation may not adequately reflect the attitude of all countries under changed circumstances. Given the prospect of an agreed international standard and other measures permitting freedom of choice, it is not unreasonable to suppose that the trading countries of the world would elect to prevent and otherwise curb those restrictive business practices which burden commerce and thwart the operation of a multilateral system of trade.

Cooperative action among governments to curb restrictive business practices in international trade requires mutual recognition of the need for such action and agreement to take individual and collective measures to meet the need. The agreement in question might take either of two alternative forms.

One form of agreement would consist of a specific list of restrictive business practices in international trade which the participating governments would regard as ipso facto violations. This list would be added to or modified in view of later experience. The other form would include a similar list of practices, but each cooperating government would consider them only prima facie violations.

The salient feature of the first form of agreement is that each participating government would agree in advance: (1) that specifically defined business practices resulting from or intended by arrangements between two or more commercial enterprises engaged in international trade are illegal and (2) that each government would, upon demonstration that such practices existed, take measures either individually or in concert to remove or eliminate them. A list of such practices might include price fixing, division of markets, limitation of production or exports, suppression of technology, boycotting, and other restraints. The agreement might also provide for an international agency to facilitate uniform national actions and otherwise assist member governments, but such an agency would not necessarily be an active element in the plan.

If such an agreement were adopted and promptly implemented by the signatory governments, it would result in a high degree of certainty and uniformity in prohibiting international restrictive business practices. Success would seem to be remote, however, in getting each participating government to agree to incorporate into its existing laws uniform definitions of restrictive business practices, even if such definitions were easy to construct for statutory purposes. Over a period of time, such an agreement may be more easily attained than can be imagined today. Traditions, customs, legal systems, and administrative procedures, however, are too diverse among countries to entertain a sanguine hope now for this achievement in a short time. Even if this end could be accomplished, the greatest common denominator of accord among the governments might still be quite small.

Under the second form of agreement--as outlined in the Proposals for Expansion of World Trade and Employment--the governments would agree in principle as to the desirability of abating restrictive business practices in international trade and would undertake individual as well as concerted action to this end. They would also agree as to the enumeration of certain practices which are considered as most likely to interfere with the attainment of the objectives of the Inter-

national Trade Organization. The Proposals suggest a special commission for international business practices to be established under the ITO and to be charged with the function of receiving complaints from governments or private business firms (with the consent of their respective governments) that the objectives of the Organization are being frustrated because of the operation of restrictive agreements. After a preliminary review of such complaints, the Organization would request further data from member governments and, if warranted, would recommend remedial action to be taken individually or cooperatively by the interested governments. It would also have the authority to request member states to consult as to appropriate solutions in any given dispute concerning business practices and to cooperate in giving effect to remedial action.

The merit of this proposed agreement lies in its flexibility and its prospects for early operation. Instead of requiring advance understanding that certain practices in and of themselves are to be specifically outlawed, it would set forth a number of restrictive practices which experience has shown to be both frequent and detrimental in their effects and which the individual governments and the international agency should consider as prima facie in conflict with the larger objectives of commercial policy. This listing would serve to indicate agreement that certain practices are generally suspect and may definitely prove to be objectionable under particular circumstances. Through the device of an international agency which would examine individual complaints as they arose and which would make appropriate recommendations to member governments of ITO, the possible deadlock of definition of what precisely constitutes restrictive practice may thereby be avoided and a positive international instrument brought into early operation during the formative period of post-war commercial relations.

Like the first form of agreement described above, the plan outlined in the Proposals would commit signatory governments to outlaw restrictive business practices in international trade and would require them to act both individually and collectively. It would not necessarily oblige them, however, to take remedial action upon the existence of specified practices, but it would require them to act when the violations listed had specified effects. This realistic approach provides a rather wide area for intergovernmental understanding and accord and offers a promising basis for further consideration by the governments of the United Nations.

FAO Conference

A. W. Anderson, Chief of the Fish and Wildlife Service's Division of Commercial Fisheries, has been named as the United States member of the Standing Advisory Committee on Fisheries for the international Food and Agriculture Organization, Secretary of the Interior J. A. Krug announced on August 9.

Mr. Anderson will attend the first meeting of the Committee at Bergen, Norway, on August 23. Other members of the Committee include representatives from the United Kingdom, Denmark, Norway, India, Canada, Newfoundland, and Iceland. It is expected that members from France, China, and South America will be appointed later.

The meeting of the Advisory Committee is in preparation for the second annual conference of the Food and Agriculture Organization, to be held in Copenhagen beginning September 2.

Among the items to be considered by the Committee in Bergen will be recommendations from ad hoc committees, the relation of FAO to international government and public bodies, the international machinery for Food and Agriculture, and representation on Standing Advisory Committees.

At the conclusion of the Standing Advisory Committee meeting in Bergen, Mr. Anderson will attend the conference of the Food and Agriculture Organization in Copenhagen in the capacity of fishery advisor to Under Secretary Dodd of the Department of Agriculture, the United States delegate.

International Allocation of Canned Fish, 1946-47

The International Emergency Food Council (which recently replaced the Combined Food Board) announced on August 30 a recommended revision of the international allocation of canned fish for the period July 1, 1946 - June 30, 1947. The revision was necessitated by changes in the estimated supplies and requirements.

Allocable supplies of canned fish are presently estimated at approximately 986.4 million pounds, from the following sources:

	Lbs.		Lbs.
U. S. (Production)	652,500,000	Spain (Exportable Surpluses)..	14,000,000
Canada (")	165,000,000	Latin America (" ")..	20,000,000
Norway (Exportable Surpluses)..	47,000,000	Other Countries (" ")..	26,900,000
Portugal (" ")..	61,000,000		

The International Emergency Food Council pointed out that canned fish supplies continue to be short of meeting world requirements in spite of the fact that substantial quantities previously recommended for UNRRA are being offered to other claimants due to lack of UNRRA funds. The recommended distribution for consumption is indicated below:

	Lbs.		Lbs.
U. S.	504,312,000	France	25,570,000
U. K. and London Food Council.	281,000,000	Latin America	23,578,000
Canada	40,000,000	Switzerland	5,670,000
UNRRA or Reserve	60,000,000	Eire	2,000,000
Belgium	16,565,000	Others	5,105,000
Philippines	22,500,000	Grand Total	986,400,000

Alaska Fisheries

Products of the Alaska fisheries as prepared for market in 1944 totaled 331,135,000 pounds, with a wholesale value of $63,270,000, Albert M. Day, Director of the Fish and Wildlife Service, disclosed on August 11 in releasing the statistical report entitled Alaska Fishery and Fur-Seal Industries: 1944.

Compared with the preceding year, these figures represent a decrease of 1,585,000 pounds in quantity and $3,246,000 in value.

Of the total 1944 production, it was pointed out, salmon products represented 76.2 percent of the whole, the lowest percentage of the total for many years. Herring accounted for 11.9 percent, halibut about 9 percent, sablefish for 1.6 percent, and all other fish, shellfish, and fur-seal products and byproducts for the remainder. The number of persons engaged in the industry was 24,665 as compared with 23,711 in 1943.

The pack of canned salmon was 4,893,059 standard cases valued at $51,196,000, a decrease of about 10.9 percent in quantity and about 12.9 percent in value from the 1943 production of 5,428,269 cases valued at $57,824,000. Ninety-three canneries were operated in Alaska in 1944, 10 more than in 1943. Employment was given to 19,079 persons as compared with 19,143 in 1943. Salmon canning was conducted in compliance with an industry concentration program for the second consecutive year.

The fishery license tax collected by the Territory of Alaska for the fiscal year ended December 31, 1944, amounted to $783,144.63, of which $584,932.75 was paid by the salmon canneries as pack tax.

The products of the herring fishery, amounting to 39,628,000 pounds, were valued at $2,458,000, an increase of 22.29 percent in quantity and 34.36 percent in value over 1943.

Eleven patrol vessels, with complements totaling 47 men, 7 speedboats, 8 launches, and 4 open boats, were engaged in fishery management and law enforcement activities in 1944. Patrol craft cruised more than 100,000 miles during the year.

Flying time of approximately 84 hours in both chartered and government-owned planes contributed effectively to patrol of the fishing grounds and observation of salmon-spawning areas. Plane travel covered about 10,500 miles.

Representatives of the Department of Justice handled 59 cases of alleged violations of Alaska fishery laws and regulations involving 152 persons in 1944. Total fines levied amounted to $17,566. The return to the Government from sales of confiscated fish were $5,845.10.

Sales of 44,676 fur-seal skins at two public auctions at St. Louis, Mo., and in private sales during the year brought a gross return of $1,634,749.25.

Alaska Fishery and Fur-Seal Industries: 1944, has been issued as Statistical Digest No. 13 of the Fish and Wildlife Service. Copies may be purchased at 20 cents each from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. The publication is not for sale by the Fish and Wildlife Service.

Alaskan Fur Seals

A total of 64,523 fur-seal skins were taken in the Government-administered sealing operations on Alaska's Pribilof Islands during the 1946 season which closed August 8, Secretary of the Interior J. A. Krug announced on August 25.

This represents a decrease of 12,441 skins under the 1945 take, due, according to officials of the Fish and Wildlife Service of the Department of the Interior, to the late arrival of the seal herd at the Islands this year, probably because of unusually severe weather last winter.

Despite the 1946 take, the seal herd numbered 3,386,008 animals when the annual census was taken on August 10, Secretary Krug stated. This is an increase of 7.31 percent over the 1945 census of 3,155,268 animals.

Fur-seals, which have a soft and beautiful underpelage are highly valued and the Pribilof Island herd is estimated to be worth in excess of $100,000,000.

When the Federal Government assumed active management of the fur-seals in the Pribilofs in 1910, the herd contained only 132,279 animals. By careful conservation the herd has been developed to its present size and, at the same time, has produced 1,367,322 skins which have been sold for the account of the Government.

More than 25,000 Alaska seal skins will be sold at a semi-annual public auction by the Fouke Fur Company in St. Louis on October 21, for the Government's account. At the last sale in St. Louis, on April 29, 28,032 seal skins were sold, the skins bringing a top price of $114 and averaging $87.51.

When the United States purchased Alaska in 1867, the fur-seal herd numbered about 3,000,000 animals, but uncontrolled independent groups killed some 329,000 seals in the following two years.

From 1870 to 1910, the Government leased the right to take fur-seal skins on the Islands to private corporations. Under a first 20-year lease, 1,977,377 skins were taken and the annual take was frequently in excess of 100,000 skins. Under a second 20-year lease, the total take was 342,651 skins.

The leasing system was discontinued in 1910 and the fur-seal herd was administered until 1913 by the Secretary of Commerce and Labor and, then, until 1939 by the Secretary of Commerce. Since 1939 it has been under the direction of the Secretary of the Interior, through the Fish and Wildlife Service. At present the herd is protected under a provisional agreement between the United States and Canada whereby Canada receives 20 percent of the skins taken.

Deferment of Key Fishery Workers

A minimum number of key workers in essential reconversion and transportation activities will be certified for occupational deferment under Selective Service by the Civilian Production Administration, it was announced by the CPA on August 23.

According to a Selective Service Board memorandum to its local boards, a registrant between the ages of 19 and 29 may be placed or retained in Class II-A if he is considered irreplaceable and indispensable to an activity essential to the national existence or if he is certified by an appropriate government agency.

The CPA has the authority to certify two classes of registrants for occupational deferment:

1. Qualified and irreplaceable production workers in industries CPA has designated as critical.
2. Supervisory, technical, or scientific personnel in essential industries.

"Critical" industries are limited to those making items on the CPA Critical Products List. "Essential" industries include those not necessarily "critical" but still basically important to the national reconversion and production programs.

Employers of self-employed registrants seeking CPA certification should send two complete sets of Selective Service Form 42A (Special-Revised) to the Office of Labor Requirements, Civilian Production Administration, Washington 25, D. C. The form requires the registrant's job description and statements concerning the importance of his work to the Nation and the probable effect on output of losing him.

CPA's authority in this respect is limited to production and transportation industries. Cases in the fishery production and processing industries will be certified by the CPA. However, no certification can be effected for individuals engaged solely in fish distribution such as wholesaling and retailing.

The Fish and Wildlife Service, because of its extensive experience in certifying for draft deferment in the fishery industries during the war, will act in an advisory capacity to CPA.

Shellfish Labeling

At a meeting of the committees on shellfish of the American Public Health Association, held in July, the matter of proper labeling for packages of frozen shellfish was discussed. The Fish and Wildlife Service representative at the meeting reported that some States require that certain information be provided with each package. The U. S. Food and Drug Administration insists upon the following appearing on each package:

1. Name and address of the producer.
2. Common name of the product.
3. Quantity in the package.

The following additional information should be included on labels for frozen shellfish if difficulties are to be avoided in certain States:

4. Certificate number of the packer.
5. A code number to indicate:
   a. Date of shucking
   b. Date of freezing
   c. Source
   d. Lot number

Purchases of Fish by Department of Agriculture

Purchases of fishery products by the United States Department of Agriculture during June amounted to $799,375. This brought purchases for the first 6 months to $4,779,567, according to WFA reports. Commodities purchased during the corresponding 6-month period in 1945 totaled $14,171,841.

Purchases of Fishery Products by USDA

Commodity	Unit	June 1946		January-June 1946	
		Quantity	F.O.B. Cost	Quantity	F.O.B. Cost
FISH AND SHELLFISH			Dollars		Dollars
Herring, canned	Cases	4,733	28,934	4,733	28,934
Mackerel, "	"	12,236	95,441	20,429	218,126
Pilchards, "	"	-	-	171,207	638,856
Salmon, "	"	-	-	277,034	3,029,414
Sardines, "	"	-	-	15,929	73,437
Fish, ground, "	"	200,000	675,000	228,000	790,800
Grand Total	"	216,969	799,375	717,332	4,779,567

Wholesale and Retail Prices

Both wholesale and retail prices for all foods displayed small increases from mid-April to mid-May, according to reports of the Bureau of Labor Statistics, Department of Labor. Average retail prices for fresh and canned and fresh and frozen fish declined 1.4 and 1.6 percent, respectively, during the period and showed decreases of 0.2 and 0.7 percent on May 14 as compared with May 15, 1945. Pink and red salmon prices dropped 0.7 and 1.4 percent, respectively, from mid-April to mid-May.

Wholesale and Retail Prices

Item	Unit		Percentage change from--	
Wholesale: (1926 = 100)		May 18,1946	Apr.20,1946	May 19,1945
All commodities	Index No.	110.9	+1.2	+4.8
Foods	do	111.5	+1.0	+4.4
Fish:		May 1946	April 1946	May 1945
Canned salmon, Seattle:				
Pink, No. 1, Tall	$ per doz. cans	1.970	0	0
Red, No. 1, Tall	do	3.694	0	0
Cod, cured, large shore, Gloucester, Mass.	$ per 100 pounds	13.50	0	0
Herring, pickled, N. Y.	¢ per pound	12.00	0	0
Salmon, Alaska, smoked, N. Y.	do	35.00	0	0
Retail: (1935-39 = 100)		May 14,1946	Apr.16,1946	May 15,1945
All foods	Index No.	142.6	+0.6	+2.7
Fish:				
Fresh and canned	do	218.3	-1.4	-0.2
Fresh and frozen	¢ per pound	36.3	-1.6	-0.7
Canned salmon:				
Pink	¢ per pound can	24.6	-0.7	-0.1
Red	do	43.3	-1.4	+7.7

WHEN TO BUY

Every month of the year in the fresh-fish markets, certain fish are better buys than others. Although the retail prices of most fish vary surprisingly little from season to season, it pays the housewife in better quality to buy a particular species of fish when the supply is greatest. When whiting or pollock, for example, are most abundant in local waters, boats are making their catches in minimum time and the fish are arriving in the markets in the best possible condition.

These comments, of course, do not apply to frozen fish, which, because of the excellence of modern refrigeration, are usually equal to fresh in taste, appearance, and food value. Just as quick freezing makes a great variety of fruits and vegetables available in attractive packages every month of the year, it also makes possible the serving of many kinds of fish out of season.

--Conservation Bulletin No. 33

FOREIGN FISHERY TRADE

Imports and Exports

GROUNDFISH IMPORTS: From January 1 through July 31 there were 29,809,350 pounds of fresh and frozen groundfish imported into the United States, an increase of 6,636,782 pounds compared with the corresponding period in 1945, according to a report received from the Bureau of Customs of the Treasury Department. The quota entitled to a reduced tariff of 1-7/8 cents per pound is 20,380,724 pounds, and all imports in excess of this figure have been subject to the full tariff rate of 2½ cents per pound.

Commodity	July 1-31 1946	June 2-29 1946	July 1945	Jan.1-July 31,1946	Jan.1-July 31,1945
Fish, fresh or frozen fillets, steaks, etc., of cod, haddock, hake, cusk, pollock, and rosefish	5,366,323	4,330,976	3,771,137	29,809,350	23,172,568

Australia

FISHERY TRAINING: In connection with the postwar fisheries expansion program planned by the Australian Government, there are to be a school and additional facilities for the training of ex-service personnel as fishery instructors, administrators, and fishermen in all aspects of modern fisheries technique and management, reports the Fisheries Newsletter (Australia) of April 1946. Based on recommendations of a Government tariff board as well as the Victorian State Development Committee, the training program will be centered at Cronulla, New South Wales. Facilities will comprise a camp with living quarters, lecture rooms, work shops, boats, fishing gear, and recreational equipment for students. The following description of the instruction program is reprinted from the Newsletter:

Arrangements have been made with the Sydney Technical College, the Division of Food Preservation and Transport, and the Division of Fisheries of the Council for Scientific and Industrial Research to provide lecturers covering theoretical subjects. A small staff of teachers will be employed or co-opted to give practical tuition. The Department of Navy has indicated its willingness to cooperate wherever possible. The first school will be limited to 40 selected trainees. Courses available for students will be of two types:

(a) A diploma course designed to equip men for executive posts with fishing companies and fishermen's associations, for posts with State Fisheries Departments and Commonwealth Fisheries research and administrative departments, and for posts with new fisheries requiring specially trained personnel.

(b) A course for operatives in any type of fishery involving less detailed theoretical work and more practical experience with boats and gear.

The syllabus will require that trainees be of matriculation standard, but certain preparatory courses will be included for those trainees whose educational qualifications are not of that standard. The preparatory courses will cover English, Mathematics, Business Principles, and Elementary Science. The main school will take the following courses:

FISHERIES BIOLOGY

(1) Detailed study of anatomy, physiology, etc. of fish.

(2) Detailed study of the sea as a living place--composition of sea water, ocean currents, tidal movements, plankton and fish food.

(3) Research methods.

(4) Fresh water fisheries.

(5) Oysters, lobsters, crayfish, prawns and crabs.

FISHERIES ECONOMICS

(1) Fisheries of the world, methods.

(2) Factors of production--manpower, gear, boats, fuel, finance.

(3) Factors of distribution--markets, transport, port facilities.

FISHERIES ADMINISTRATION AND LEGISLATION

(1) Fisheries management, depletion, overfishing.

(2) Legislation in each state.

(3) Overseas legislation and international agreements.

FISHERIES TECHNOLOGY

(1) Detailed study of fishing grounds, oyster farming, fresh water fisheries.

(2) Detailed study of types of gear--its design, construction, preservation and repair.

(3) Detailed study of boats--design, construction, apparatus, repair; use of slip ways.

(4) Engines, study of types, upkeep and repair.

SEAMANSHIP AND NAVIGATION

Courses to fit trainees to take full responsible charge of all types of fishing craft.

FOOD TECHNOLOGY

Detailed study of the handling of fish--transport, preserving, refrigeration and processing.

These courses will be covered by lectures and practical classes. Trainees will hear lectures on seamanship and navigation, the catching and the handling of fish, and they will then receive practical experience by going out in boats and by making, caring for, repairing, and using gear. The courses are so designed that trainees may secure a good working knowledge of the main fishing methods and boats. At the conclusion of the four months intensive study at the school trainees will be placed in turn with skilled crews in the various types of fisheries. In this way it is hoped to give trainees the widest experience to fit them for posts in any fishery. This section of the training will occupy eight months.

Extension of Scheme: It is possible that the scheme may be extended to include short course special schools for fishermen who may wish to know more about boat care, new types of gear, handling of fish, or navigation. It is also possible that eventually short course schools may be held in various centers in all states. If, for example, a branch of a fishermen's league should find that its members wished to have a two week's school in navigation, or the making, preservation, and repair of nets, or on the handling and packing of fish, the Division may consider sending to that branch at its home port a lecturer with equipment, including films.

POSTWAR DEVELOPMENT: The Commonwealth of Australia has entered into a postwar program of fishery development, the basis for which is outlined as follows in the April 1946 issue of Fisheries Newsletter, published by the Ministry of Postwar Reconstruction for Australia.

For some years the Commonwealth Government has been accepting new responsibilities in connection with the Australian fishing industry. In 1937, the Commonwealth Council for Scientific and Industrial Research established a Division of Fisheries to carry out certain scientific investigations in connection with the industry. In 1943, the Production Executive of the Federal Cabinet directed the establishment of an authority, to be known as the Controller of Fisheries, to be responsible for wartime control and management of the industry. In December 1945, the Cabinet approved of the establishment of a Commonwealth Fisheries Commission to be a permanent Commonwealth Fisheries authority. The Fisheries Commission is now in course of becoming established; it will discharge the Commonwealth's administrative and developmental responsibilities; and also will carry out economic research into the industry.

During the war it was necessary that expert opinion should be available to establish the place of the fishing industry in a wartime economy and to consider its requirements of manpower, fuel, boats, and equipment. While directing that the Controller of Fisheries should discharge these functions, the Production Executive also directed that attention should be given to various other measures whereby the industry might be assisted to take its part in the wartime economy.

The decision taken by the Cabinet in December 1945 will have the effect of transforming the wartime instrumentality of the Controller of Fisheries to a permanent peace-time organization with functions some of which will be a continuation of those already developed and others which were unnecessary or impossible during war. The administrative functions include the management of fisheries which lie beyond the three-mile limit and the representation of the Commonwealth at Conferences where problems concerning the fishing industry are concerned; this function also includes the formulation of policy in respect of the industry where problems of production, tariffs, international collaboration, etc., demand a special knowledge. The developmental function will cover activities which will lead to an increase in the Australian fisheries catch, and a general increase in the efficiency of the fishing operations.

Development of New Fisheries: It is clear that, if new methods and new equipment are to come into use, there must be available in the first place a sufficient body of adequately trained personnel to handle the equipment. Thus, the Commission will be responsible for a program of technical instruction. Again, there is no doubt that there are considerable prospects of expansion of the Australian fishing industry. Such expansion will require some measure of organization of the factors of production and distribution to ensure success. New fisheries will involve new boats, new gear, new facilities for handling the catch, and perhaps of processing it. It will be the responsibility of the Commission to do all in its power to assist the fishing industry to expand along efficient lines.

In all this work it is proposed to work as much as possible through existing State Departments of Fisheries; expansion of the staff may be necessary in some instances, but the intention is that the staff of the Commission should be kept at a minimum.

British West Indies

FISHERY DEVELOPMENT: A sum equivalent to $335,000 has been made available for fishery work in the British West Indies, according to a report to the U. S. Department of State from the U. S. Consulate at Barbados. The money has been placed at the disposal of a Governor-in-Executive Committee. It will be used for the rehabilitation and extension of the fishing industry.

Canada

COLD-STORAGE: A gain of over 7 million pounds during July in Canadian cold-storage holdings of fishery products was indicated in preliminary reports issued early in August by the Dominion Bureau of Statistics. Fresh frozen items on hand on August 1 totaled 39,300,000 pounds, compared to 32,048,000 pounds on July 1 and 31,454,000 pounds on August 1, 1945.

Japan

FISHERY EDUCATION: Report No. 37 of the Natural Resources Section of the Headquarters of the Supreme Commander for the Allied Powers in Tokyo, recently issued, describes in considerable detail the facilities in Japan for fishery education and research. The summary of this 32-page report is as follows:

1. In keeping with the importance of fish and marine products in the general economy of Japan, the Japanese Government has placed much emphasis on fishery education and fisheries research, both biological and technological.

2. Japan has 32 prefectural fisheries schools in 24 prefectures. These schools give special training in the biology of fishes and chemistry of marine products as well as technical and practical training in fishing, fish processing, navigation, boat building, and allied subjects. The schools are designed to train men to be expert fishermen, and cannery managers. Graduates from the prefectural fisheries schools are eligible to enter the two fisheries colleges, one of which is at Hakodate, Hokkaido, and the other at Tokyo. The colleges offer three- and five-year courses in fisheries. Three of the seven Imperial universities in Japan have fisheries departments in their faculties of agriculture. The departments offer a three-year course leading to a college degree. This is the highest level of fisheries education in Japan. Japan has 118 government-supported fisheries and marine products research stations and branches. Six are operated by the government and 112 by prefectures. These stations conduct research in fisheries biology, fishing methods, and fisheries products.

3. Twenty-one marine and fresh-water biological stations are associated with universities and fisheries colleges. These stations are designed for instruction, but much valuable research is done in fisheries biology by the university professors. Two of the large fishing companies operate three laboratories for research in the biology of fishes. One privately endowed marine research station is in Japan. In addition to the marine stations in Japan Proper, the Japanese operated 14 fisheries research stations in Korea, five in Formosa, one in Karafuto, one in the South Seas, one in Kwantung, and three in Manchuria.

Nova Scotia

FISHERIES PRODUCTION: The latest fisheries statistics for the Canadian Maritime Provinces, reported to the U. S. Department of State by the American Consulate General at Halifax, Nova Scotia, indicated a considerable decrease in total landings during the second quarter of 1946, probably as a result of unusually bad sea weather. According to the Consulate's report, dated June 26, 1946, fish prices remain very high, with haddock and cod averaging 3½ to 4½ cents per pound on the pier. Herring prices along the New Brunswick coast fluctuated from $1.50 to $3 a barrel (200 pounds to the barrel) in April, and the demand was high due to the construction of new plants and smokehouses. In general, through May and June fish prices remained high and steady with demand greater than supply.

In April, total fish landings for the three Maritime Provinces were 28,173,000 pounds with an approximate landed value of $1,885,400, representing a decrease of 9,807,000 pounds and a decrease in landed value of approximately $184,200 as compared with April 1946. Bad weather has hampered operations.

The report states that the concensus among local fish processors is that the present high prices for fish will obtain through 1946. They believe, however, that by 1947 strong outside competition may be met in the United States markets, forcing a fall in price. With the anticipated decline in price, it is also expected that producers will take greater care in the quality processed for export as fresh or frozen fillets, and turn a larger share of the catch into the dried and salt fish markets. Recently, the supplies of salt fish, including alewives and herring, for export have been very limited.

Peru

DEVELOPMENT OF FISHING INDUSTRY: In a Supreme Resolution of June 12, 1946, the Peruvian Minister of Agriculture is authorized to administer the fishing industry either directly or through agents, for the purpose of stimulating production, according to a report to the U. S. Department of State from the American Embassy at Lima, Peru. The resolution has only budgetary significance; however, the language is sufficiently broad to enable the Minister to do about what he wishes within limits of available funds in the fishing industry.

ALASKA, whose principal industry is fisheries, is the chief production center of salmon, the most valuable fishery resource of the United States. It is also an important source of herring, halibut, sablefish, and clams. The breeding grounds of the fur seal are in Alaska. The continental shelf of the Northwest is a vast area rich in untapped resources, and it offers great opportunity for development and expansion of bottom fisheries.

The Alaska catch in 1943 was 577 million pounds.

--Senate Document No. 51

FEDERAL LEGISLATION, DECISIONS, ORDERS, ETC.

Department of Agriculture

HERRING AND MACKEREL SET-ASIDES: None of the 1946 pack of canned Atlantic sea herring, including Maine sardines, and no canned Pacific mackerel will be set aside for delivery to Government agencies, the United States Department of Agriculture announced on August 9, when issuing Amdt. 21 to WFO-44, effective August 11. Atlantic mackerel canned after August 10 is also exempted from set-aside provisions.

It is estimated that about 575,000 cases of Maine sardines and 361,000 cases of canned mackerel will be released to domestic civilian consumers as a result of the amendment.

Originally, canners had been required to set aside 45 percent of their packs of these species for delivery to the Government during the year beginning April 1, 1946. Recent reductions in requirements for the United Nations Relief and Rehabilitation Administration and other relief needs, Department spokesmen said, have made it possible to revoke delivery restrictions. Canners of the affected species, however, must continue to report their packs until March 31, 1947.

IMPORT CONTROLS: The Department of Agriculture, on August 15, removed 27 commodities from import controls under WFO-63. Amdt. 14 to WFO-63, in the form of a complete revision of the Appendix listing commodities still under control of the order, became effective on that date.

The amendment removed from import controls the following fishery items: fish scrap and fish meal, excluding fish scales; and crabmeat, including crab sauce and crab paste, canned.

The spokesman for the Department, in announcing the removal of import controls on the items, stated that the supply is such that the removal of the import controls would not interfere with equitable world distribution.

SALTED FISH: Import quotas covering the 1946 pack of salted cod and related species from Newfoundland, Canada, and Norway were announced on August 1 by the U. S. Department of Agriculture. The action was effected through an amendment to WFO-72 and covers imports into the continental United States.

The quotas for each qualified importer--effective August 1, 1946--are as follows: from Canada, 75 percent of the quantity he imported from that country in 1942; from Norway, 80 percent of his annual average importations in the period from 1938 to 1940; from Newfoundland, 65 percent of the combined quantity he imported in 1942 from Newfoundland and Iceland. Importers who in 1942 imported salted fish only from Iceland may fill their quotas with imports from Newfoundland.

The 75 percent quota for Canadian packed salted fish compares with a quota of 60 percent last year, while the Newfoundland quota remains unchanged. No quotas were established for salted fish imports from Norway last year.

Purpose of the action is to assure equitable distribution among importers of the total supply of salted fish recommended to be allocated to the United States by the International Emergency Food Council.

Civilian Production Administration

TIN SUPPLY: World tin production will not attain prewar levels until some time in 1949, John J. Croston, special investigator for the Civilian Production Administration, reported on July 29 following a recent on-the-spot survey of Far Eastern conditions. Only about 41,000 tons of tin were located in the Orient, which is normally the source of 70 percent of the world's tin supply, he said. This 41,000-ton supply is approximately three months' world consumption at the present rate.

Mr. Croston, who is Deputy Director of CPA's Metals and Minerals Division, recently returned to this country after visiting India, Burma, Malaya, the Netherlands East Indies, Japan, China, French Indo-China, and Siam. He was lent by CPA to the Reconstruction Finance Corporation to make this tin survey and to help speed rehabilitation of the tin mines there.

The relatively small tin stocks available after three and one-half years of Japanese domination exploded the story, based on Japanese reports during the war, that enormous quantities of tin were being produced by Japan. The Japanese Government reported then that a huge tin production had been attained with the aid of enthusiastic mine workers in the "Greater East Asia Co-Prosperity Sphere."

Tin's greatest peacetime as well as war use is as a coating for steel plate in making food containers and other types of containers that must be sealed. It is also used in the production of bronze and in many types of motor bearings.

The poor condition of the Far Eastern tin mines will limit 1946 production to approximately 24,000 tons in 1946, compared with a peacetime production in the Orient of over 160,000 tons. The 1947 rate will be only about one-half of the peacetime rate, and even in 1948 and 1949 may not reach a prewar basis. Political unrest, inadequate food supplies, and lack of proper working conditions are contributing factors in the expected production lag.

The United States cannot obtain all of this production, since it must be divided among all the consuming nations hungry for tin after starvation rations for more than four years.

Food and Drug Administration

OYSTER STANDARDS: The Food and Drug Administration on August 23 issued a new regulation defining standards of identity and quality, and fill of containers, for raw and shucked oysters. The regulation, which is changed only in minor details from the proposed order (Commercial Fisheries Review, August 1946, p. 39), reads as follows:

By virtue of the authority vested in the Federal Security Administrator by provisions of the Federal Food, Drug, and Cosmetic Act (secs. 401, 701, 52 Stat. 1046, 1055; 21 U.S.C. 341, 371); the Reorganization Act of 1939 (53 Stat. 561; 5 U.S.C. 133); and Reorganization Plans No. I (53 Stat. 1423, 4 F.R. 2727) and No. IV (54 Stat. 1234, 5 F.R. 2421); and upon the basis of evidence of record at the hearing held pursuant to the notices issued on June 16, 1945 (10 F.R. 7266-7) and October 19, 1945 (10 F.R. 13005), and upon consideration of exceptions filed to the proposed order issued by the Acting Federal Security Administrator on July 3, 1946 (11 F.R. 7530), the following order is hereby promulgated:

Findings of fact. 1. In the United States oysters are taken commercially from the salty coastal waters and bays of nineteen states on the Atlantic, Gulf, and Pacific coasts. The oysters found along the Atlantic and Gulf coasts belong to the species Ostrea virginica and are commonly called oysters, and in some areas "Eastern oysters." The oysters grown along the Pacific coast belong to one of two species: Ostrea lurida, commonly called Olympia oysters, and Ostrea gigas, now commonly called Pacific oysters. From the consumers' standpoint the most significant difference between oysters of these species is their size. The range of sizes of the shucked oysters of the three species are as follows:

Species:	*Approximate number of oyster meats per gallon*
O. lurida	1,600-2,400
O. virginica	150- 600
O. gigas	40- 160

2. Eastern oysters after removal from the shell are sold to consumers under the names "oysters", "fresh oysters", and "shucked oysters". Pacific oysters and Olympia oysters after removal from the shell are sold to consumers under the names "Pacific oysters" and "Olympia oysters". Within recent years increasing amounts of raw oysters of all species have been packed in hermetically sealed containers for direct sale to consumers. Some confusion has arisen on the part of consumers due to the similarity of such containers to those used for canned oysters which are processed by heat. Oysters not processed by heat require constant refrigeration to prevent spoilage while those which are processed by heat in sealed containers require no refrigeration. The terms "raw oysters" or "shucked oysters" are designations reasonably calculated to prevent confusion. The term "fresh oysters" conveys another meaning in addition to that conveyed by "raw" or "shucked" and may be confusing.

3. With few exceptions shucked oysters, other than Olympia oysters, are separated into size groups. Occasionally the oysters as shucked are of such uniform size that no separation is made. In either case prices are based on size as measured by the number of oyster meats required to fill a gallon container. Trade designations for the varigus sizes of eastern oysters, based on the number of oysters per gallon, are now and have for many years been commonly used by packers, wholesalers, and some retailers of oysters. Consumers generally and many retail dealers are not now familiar with these trade designations because oysters have not commonly been sold to consumers under these designations. Consumers are interested in the size of the oysters and in purchasing them generally state the size desired by such terms as "large" or "frying" oysters and "small" or "stewing" oysters. The price of eastern oysters increases with the size.

4. Four classifications of eastern oysters according to size are well established and in general use in the trade. The trade designations for these sizes are, in the order of decreasing size: counts (in some areas called plants), extra selects, selects, and standards. Occasionally, oysters much smaller than those usually packed as "standards" are sold under this designation. A separate designation is necessary to describe such oysters properly. The number per gallon of eastern oysters of a designated size varies somewhat in practice. Different packers do not always use the same designations for oysters of the same or comparable size and the same packer may at different times pack oysters of the same or comparable size under different size designations. Several years ago the oyster industry suggested certain descriptive names synonymous with trade size designations but such descriptive names have not been used to any significant extent. Reasonable ranges of count per gallon, the corresponding trade terms for such sizes, and self-explanatory descriptive names are as follows:

Trade name	Descriptive name	Count per gallon
Counts or plants	Extra large	Not more than 160.
Extra selects	Large	161-210.
Selects	Medium	211-300.
Standards	Small	301-500.
Standards	Very small	Over 500.

5. It is in the interest of consumers to have oysters of a designated size classification of approximately the same size. To assure uniformity of size of eastern oysters it is reasonable to require that a quart measure which is filled by selecting the largest oysters from a representative gallon contain not less than 22.5 percent of the minimum number of oysters permitted in such gallon, and that a quart measure which is filled by selecting the smallest oysters contain not more than 27.5 percent of the maximum number of oysters permitted in such gallon.

6. Pacific oysters are segregated and sold according to size on the basis of the number of oyster meats in a gallon. Prior to 1942 the size classifications were designated by letters as follows in descending order from largest to smallest:

AAA, AA, A, B, C, and D. All packers did not grade the oysters uniformly and the meanings of the letter designations were not generally known to consumers. The price of Pacific oysters, by weight or volume, in general, decreases as the size increases.

7. During the war packers of Pacific oysters began selling such oysters to the United States Army by weight and designating sizes by the number of oysters per pound. This practice soon spread to civilian sales and is now in general use. A consumer size package commonly used has a capacity of one pint and is filled by slightly more than one pound of oysters and is usually labeled to indicate the number of oysters per pint or pound. Labels of larger containers now commonly designate the number of oysters per pint or pound. The designation of Pacific oysters by the number per pint or pound has become common practice for identifying them as to size. The designations now in common use for the various size classifications of Pacific oysters are as follows:

Count per gallon:	*Designation*
40 to 64	5 to 8 per pint.
65 to 80	8 to 10 per pint.
81 to 96	10 to 12 per pint.
97 to 120	12 to 15 per pint.
121 to 144	15 to 18 per pint.
More than 144	over 18 per pint.

It is desirable that in a particular size designation the oysters be comparable in size or approximately the same size. To assure uniformity of size of Pacific oysters it is reasonable to require that the largest oyster in the container be no more than twice the weight of the smallest oyster therein.

8. Shucked Olympia oysters are much smaller than the eastern or Pacific oysters and are not segregated for size.

9. The process of preparing shucked oysters from shell oysters varies somewhat in different localities but is essentially as follows for all these species: The shell containing the oyster, which may have been washed to remove adhering dirt, silt, etc., is opened, the muscle of the oyster cut from the shell and the oyster removed and placed into a shucking pail. In some plants the shucking pails contain no fresh water, in some the shucking pails are partly filled with fresh water, and in others the pails are perforated. In some plants immediately after shucking the oysters are dropped by the shucker into a trough containing flowing water by which the oysters are carried to the place in the plant where they are washed. This is called "fluming". The oysters, if not already drained during the shucking process, are drained to remove the liquid which has exuded from them and any which was in the shucking pail. The oysters are then washed to remove any foreign adhering matter such as sand, dirt, silt, pieces of shell, etc. After washing the oysters are drained to remove wash water, and packed without the addition of any other substance.

10. There is considerable variation in the methods of washing. In some plants the oysters, either individually or in mass, are washed on a strainer usually called a "skimmer" with a stream or spray of water. In some plants the oysters are placed into a container with water and agitated. A very common method of washing, particularly on the Atlantic and Pacific coasts, is known as "blowing." In this process the oysters are placed in a tank with water and agitated by a current of compressed air usually introduced through a pipe at the bottom of the tank. Blowing is an efficient method of cleaning the oysters and 3 to 5 minutes blowing time is generally sufficient. In order to remove a black pigment which is sometimes found on the mantle of Pacific oysters it is at times necessary to blow such oysters for longer periods. This pigment is not harmful but it detracts from the appearance of the oysters.

11. When oysters of any species are removed from the shell and placed in contact with fresh water some of their soluble constituents are removed, and the oysters absorb some of the water. Generally the amount of water absorbed and the amounts of soluble constituents lost are in direct relation to the length of time the oysters are in contact with fresh water. Contact of shucked oysters with fresh water generally results in increasing their size due to water absorption, in loss of flavor and of desirable nutritive ingredients. This is contrary to the interest of consumers. Prolonged contact of oysters with fresh water during the washing process is one of the chief causes of such abuses. Oysters should not be washed longer than is necessary to clean them. It is impracticable to prescribe a uniform method of washing which is effective and unobjectionable or to specify the exact time necessary for washing oysters that will be applicable to all oysters at all times. A reasonable method of preventing excessive or unnecessary absorption of water and loss of nutritive ingredients and flavor due to action of fresh water is to limit the total length of time during which oysters are in contact with fresh water.

12. When oysters are agitated during contact with fresh water, whether the agitation is by blowing or otherwise, the action of the water on the oysters, i. e., the absorption of water by the oysters and the loss of salt and solids, is about twice as rapid as when oysters are in contact with still or unagitated fresh water. In computing a reasonable time that oys-

ters may be in contact with fresh water after removal from the shucking pail, allowance should be made for the time necessary to prepare the oysters for washing, by blowing or otherwise, the actual washing time, and the time necessary to transfer the oysters to the skimmer for draining. The total time of contact with fresh water after the oysters are removed from the shuckers' pails until draining commences need not exceed 30 minutes and is usually much less. Since the reaction of oysters with fresh water is about twice as rapid when the oysters are being agitated as when still, the length of time of contact with fresh water during which oysters are agitated should be doubled when computing a reasonable time limit for preventing unnecessary abuse of oysters.

13. When oysters are shucked into pots which contain fresh water there is some absorption by the oysters of some of the water. Where the container into which oysters are shucked contains no more fresh water than ¼ of the capacity of the container, and it is filled with oysters by the shucker, the composition of the water is rapidly altered by material which exudes from the oysters and the absorption of water is not excessive. It is reasonable to place this limit on the amount of water in the shucking containers.

14. All oysters exude some fluid after removal from the shell. This is called bleeding. This fluid is practically all water. Shucked oysters, even of the same species and grown in the same geographical area when subjected to the same or similar conditions, do not always react in the same way. The differences manifest themselves in many ways, among them the amount of bleeding, the length of time of bleeding, the amount of water absorbed when placed in fresh water, and the amount of soluble material and nutrients lost when placed in fresh water. Oysters in some sections of the country, particularly in certain sections of the Gulf area, bleed more freely and for longer periods of time than oysters from other sections of the country. If oysters are washed, drained, and packed while still bleeding, liquid will appear in the container in which packed, giving the appearance of inadequate drainage.

15. Failure to drain the oysters properly after washing is the principal cause which results in the inclusion of extraneous and unnecessary water in the packed oyster. Adequate drainage is accomplished by permitting the oysters to drain on a skimmer or other perforated surface for a sufficient time. The oysters should be distributed evenly over the surface. The draining area should be not less than 300 square inches per gallon of oysters drained and the perforations should be at least ¼ of an inch in diameter and not less than 1¼ inches apart. Adequate drainage may be determined objectively by measuring the amount of liquid remaining in the packed oysters. When such oysters contain not more than 5 percent liquid when tested within 15 minutes after packing by the method described in Finding 16 they may be considered to have been adequately drained. An alternative requirement applicable to oysters which bleed for long periods of time is to require that they be drained under the conditions heretofore described in this finding for not less than five minutes after the last washing with fresh water.

16. The method of testing referred to in Finding No. 15 is as follows: Take at least a gallon of oysters and obtain weight; drain these oysters for 2 minutes on a skimmer of the dimensions and in the manner described in Finding No. 15; remove and weigh drained oysters and calculate weight lost as percentage of weight before draining.

17. Shucked oysters placed in contact with water of a higher degree of salinity than the water in which they were grown shrink and when placed in contact with water of a lower salinity there is loss of solids and absorption of water, increasing as the salinity decreases. There is no known formula by which the amount of shrinkage or absorption can be determined. The salinity of the water in which oysters grow varies from approximately 2 to 32 parts per thousand (.2 to 3.2 percent salt). If water in containers into which oysters are shucked or in which oysters are washed contains not less than .75 percent salt no appreciable loss of solids or absorption of water is likely to occur.

18. The practice of holding oysters prior to shucking in water of lower saline content than that in which they were grown, sometimes called "floating", or any other practice which causes the oysters to absorb water prior to shucking, is not in the interest of consumers and should be prohibited.

Conclusions. On the basis of the foregoing findings of fact it is concluded that the following regulations fixing and establishing definitions and standards of identity for oysters, raw oysters, shucked oysters, will promote honesty and fair dealing in the interest of consumers:

Sec.

36.10 Oysters, raw oysters, shucked oysters; identity.

36.11 Extra large oysters, oysters counts (or plants), extra large raw oysters, raw oysters counts (or plants), extra large shucked oysters, shucked oysters counts (or plants); identity.

36.12 Large oysters, oysters extra selects, large raw oysters, raw oysters extra selects, large shucked oysters, shucked oysters extra selects; identity.

36.13 Medium oysters, oysters selects, medium raw oysters, raw oysters selects, medium shucked oysters, shucked oysters selects; identity.

36.14 Small oysters, oysters standards, small raw oysters, raw oysters standards, small shucked oysters, shucked oysters standards; identity.

36.15 Very small oysters, very small raw oysters, very small shucked oysters; identity.

36.16 Olympia oysters, raw Olympia oysters, shucked Olympia oysters; identity.

36.17 Pacific oysters sizes 5 to 8 per pint, raw Pacific oysters size 5 to 8 per pint, shucked Pacific oysters size 5 to 8 per pint; identity.

36.18 Pacific oysters size 8 to 10 per pint, raw Pacific oysters size 8 to 10 per pint, shucked Pacific oysters size 8 to 10 per pint; identity.

Sec.

36.19 Pacific oysters size 10 to 12 per pint, raw Pacific oysters size 10 to 12 per pint, shucked Pacific oysters size 10 to 12 per pint; identity.

36.20 Pacific oysters size 12 to 15 per pint, raw Pacific oysters size 12 to 15 per pint, shucked Pacific oysters size 12 to 15 per pint; identity.

36.21 Pacific oysters size 15 to 18 per pint, raw Pacific oysters size 15 to 18 per pint, shucked Pacific oysters 15 to 18 per pint; identity.

36.22 Pacific oysters size over 18 per pint, raw Pacific oysters size over 18 per pint, shucked Pacific oysters size over 18 per pint; identity.

§ 36.10 *Oysters, raw oysters, shucked oysters; identity.* (a) Oysters, raw oysters, are the class of foods each of which is obtained by shucking shell oysters and preparing them in accordance with the procedure prescribed in paragraph (b) of this section. The name of each such food is the name specified in the applicable definition and standard of identity prescribed in §§ 36.11 to 36.22, inclusive.

(b) If water, or salt water containing less than 0.75 percent salt, is used in any vessel into which the oysters are shucked, the combined volume of oysters and liquid when such oysters are emptied from such vessel is not less than four times the volume of such water or salt water. Any liquid accumulated with the oysters is removed. The oysters are washed, by blowing or otherwise, in water or salt water, or both. The total time that the oysters are in contact with water or salt water after leaving the shucker, including the time of washing, rinsing, and any other contact with water or salt water is not more than thirty minutes. In computing the time of contact with water or salt water, the length of time that oysters are in contact with water or salt water that is agitated by blowing or otherwise, shall be calculated at twice its actual length. Any period of time that oysters are in contact with salt water containing not less than 0.75 percent salt before contact with oysters, shall not be included in computing the time that the oysters are in contact with water or salt water. Before packing into the containers for shipment or other delivery for consumption the oysters are thoroughly drained and are packed without any added substance.

(c) For the purposes of this section:

(1) "Shell oysters" means live oysters of any of the species, Ostrea virginica, Ostrea gigas, Ostrea lurida, in the shell, which, after removal from their beds, have not been floated or otherwise held under conditions which result in the addition of water.

(2) "Thoroughly drained" means one of the following:

(i) The oysters are drained on a strainer or skimmer which has an area of not less than 300 square inches per gallon of oysters drained and has perforations of at least ¼ of an inch in diameter and not more than 1¼ inches apart, or perforations of equivalent areas and distribution. The oysters are distributed evenly over the draining surface of the skimmer and drained for not less than five minutes; or

(ii) The oysters are drained by any method other than that prescribed by subdivision (i) of this subparagraph whereby liquid from the oysters is removed so that when the oysters are tested within 15 minutes after packing by draining a representative gallon of oysters on a skimmer of the dimensions and in the manner described in subdivision (i) of this subparagraph for two minutes, not more than 5 percent of liquid by weight is removed by such draining.

§ 36.11 *Extra large oysters, oysters counts (or plants), extra large raw oysters, raw oysters counts (or plants), extra large shucked oysters, shucked oysters counts (or plants); identity.* Extra large oysters, oysters counts (or plants), extra large raw oysters, raw oysters counts (or plants), extra large shucked oysters, shucked oysters counts (or plants), are of the species Ostrea virginica and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains not more than 160 oysters and a quart of the smallest oysters selected therefrom contains not more than 44 oysters.

§ 36.12 *Large oysters, oysters extra selects, large raw oysters, raw oysters extra selects, large shucked oysters, shucked oysters extra selects; identity.* Large oysters, oysters extra selects, large raw oysters, raw oysters extra selects, large shucked oysters, shucked oysters extra selects, are of the species Ostrea virginica and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains more than 160 oysters but not more than 210 oysters; a quart of the smallest oysters selected therefrom contains not more than 58 oysters, and a quart of the largest oysters selected therefrom contains more than 36 oysters.

§ 36.13 *Medium oysters, oysters selects, medium raw oysters, raw oysters selects, medium shucked oysters, shucked oysters selects; identity.* Medium oysters, oysters selects, medium raw oysters, raw oysters selects, medium shucked oysters, shucked oysters selects, are of the species Ostrea virginica and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains more than 210 oysters but not more than 300 oysters; a quart of the smallest oysters selected therefrom contains not more than 83 oysters, and a quart of the largest oysters selected therefrom contains more than 46 oysters.

§ 36.14 *Small oysters, oysters standards, small raw oysters, raw oysters standards, small shucked oysters, shucked oysters standards; identity.* Small oysters, oysters standards, small raw oysters, raw oysters standards, small shucked oysters, shucked oysters standards, are of the species Ostrea virginica and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains more than 300 oysters but not more than 500 oysters; a quart of the

smallest oysters selected therefrom contains not more than 138 oysters and a quart of the largest oysters selected therefrom contains more than 68 oysters.

§ 36.15 *Very small oysters, very small raw oysters, very small shucked oysters; identity.* Very small oysters, very small raw oysters, very small shucked oysters, are of the species Ostrea virginica and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains more than 500 oysters, and a quart of the largest oysters selected therefrom contains more than 112 oysters.

§ 36.16 *Olympia oysters, raw Olympia oysters, shucked Olympia oysters; identity.* Olympia oysters, raw Olympia oysters, shucked Olympia oysters, are of the species Ostrea lurida and conform to the definition and standard of identity prescribed for oysters in § 36.10.

§ 36.17 *Pacific oysters size 5 to 8 per pint, raw Pacific oysters size 5 to 8 per pint, shucked Pacific oysters size 5 to 8 per pint; identity.* Pacific oysters size 5 to 8 per pint, raw Pacific oysters size 5 to 8 per pint, shucked Pacific oysters size 5 to 8 per pint, are of the species Ostrea gigas and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains less than 65 oysters and the largest oyster in the container is not more than twice the weight of the smallest oyster therein.

§ 36.18 *Pacific oysters size 8 to 10 per pint, raw Pacific oysters size 8 to 10 per pint, shucked Pacific oysters size 8 to 10 per pint; identity.* Pacific oysters size 8 to 10 per pint, raw Pacific oysters size 8 to 10 per pint, shucked Pacific oysters size 8 to 10 per pint, are of the species Ostrea gigas and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains more than 64 and not more than 80 oysters, and the largest oyster in the container is not more than twice the weight of the smallest oyster therein.

§ 36.19 *Pacific oysters size 10 to 12 per pint, raw Pacific oysters size 10 to 12 per pint, shucked Pacific oysters size 10 to 12 per pint; identity.* Pacific oysters size 10 to 12 per pint, raw Pacific oysters size 10 to 12 per pint, shucked Pacific oysters size 10 to 12 per pint, are of the species Ostrea gigas and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains more than 80 and not more than 96 oysters, and the largest oyster in the container is not more than twice the weight of the smallest oyster therein.

§ 36.20 *Pacific oysters size 12 to 15 per pint, raw Pacific oysters size 12 to 15 per pint, shucked Pacific oysters size 12 to 15 per pint; identity.* Pacific oysters size 12 to 15 per pint, raw Pacific oysters size 12 to 15 per pint, shucked Pacific oysters size 12 to 15 per pint, are of the species Ostrea gigas and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains more than 96 and not more than 120 oysters, and the largest oyster in the container is not more than twice the weight of the smallest oyster therein.

§ 36.21 *Pacific oysters size 15 to 18 per pint, raw Pacific oysters size 15 to 18 per pint, shucked Pacific oysters 15 to 18 per pint; identity.* Pacific oysters size 15 to 18 per pint, raw Pacific oysters size 15 to 18 per pint, shucked Pacific oysters size 15 to 18 per pint, are of the species Ostrea gigas and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains more than 120 and not more than 144 oysters, and the largest oyster in the container is not more than twice the weight of the smallest oyster therein.

§ 36.22 *Pacific oysters size over 18 per pint, raw Pacific oysters size over 18 per pint, shucked Pacific oysters size over 18 per pint; identity.* Pacific oysters size over 18 per pint, raw Pacific oysters size over 18 per pint, shucked Pacific oysters size over 18 per pint, are of the species Ostrea gigas and conform to the definition and standard of identity prescribed for oysters by § 36.10 and are of such size that one gallon contains more than 144 oysters and the largest oyster in the container is not more than twice the weight of the smallest oyster therein.

The regulations hereby promulgated shall become effective January 1, 1947.

Dated: Aug. 23, 1946.

[SEAL] MAURICE COLLINS,
Acting Administrator.

Office of Price Administration

FISH MEAL PRICES: On May 13, 1946, the Price Administrator increased maximum prices of fish meal by $10.00 per ton, and maximum prices of fish scrap and tankage by $7.50 per ton.

The Emergency Price Control Act of 1942, as amended, the OPA said on August 29, now provides that the Administrator shall, in establishing maximum prices

applicable to wholesale or retail distributors, allow the average current cost of acquisition of any commodity plus such average percentage discount or markup as was in effect on March 21, 1946. It becomes necessary, therefore, to adjust maximum markups for wholesalers, retailers, jobbers, and car-door sellers for commodities covered by the regulation in which base prices were increased since March 31, 1946. Accordingly, Amdt. 10 to RPS-73 has been issued to reflect the increases required by the above provision.

Excerpts follow:

> Revised Price Schedule 73 is amended in the following respects:
>
> 1. Paragraphs (h) (1), (h) (2), and (h) (3) of § 1363.12 are amended to read as follows:
>
> (h) *Maximum prices for sales by commercial distributors.* (1) The maximum price of a commercial distributor on the sale of fish meal or fish scrap which he purchased from the producer, and on the sale of fish meal made from fish scrap which he purchased from the producer, shall be the maximum price which said producer may charge hereunder plus a markup not exceeding the percentage markup over cost of acquisition (or weighted average of percentage markups) which said commercial distributor used on March 31, 1946 on sales of like fish meal or fish scrap.
>
> (2) The maximum price of a commercial distributor purchasing fish meal or fish scrap for resale from another commercial distributor (who in turn purchased directly from a producer) shall not exceed the maximum price which said last mentioned commercial distributor may charge hereunder plus a markup not exceeding the percentage markup over cost of acquisition (or weighted average of percentage markups) which said first mentioned commercial distributor used on March 31, 1946 on sales of like fish meal or fish scrap.
>
> (3) Any commercial distributor not in business on March 31, 1946 shall adopt and use the percentage markup of that commercial distributor who is his closest competitor.
>
> 2. Paragraph (i) of § 1363.12 is amended to read as follows:
>
> (i) *Maximum prices for sales at retail.* The maximum price for sales of fish meal at retail is the maximum price the retailer seller could lawfully have paid to the person from whom he purchased the fish meal delivered to the receiving point of the seller, plus $8.00 per ton.
>
> This amendment shall become effective September 3, 1946.

EXEMPTIONS: Exemption from price control of about 50 miscellaneous items--consisting almost entirely of imported food specialties and other commodities not significantly affecting the cost of living or business costs--was announced on August 5 by the Office of Price Administration when issuing Amdt. 42 to SO-132.

Any items contained in the new list which are at present decontrolled under provisions of the new price control act will remain free from price control even though major food items from which they are derived are returned to price control by the Decontrol Board, OPA said.

A complete list of exempted fishery items, of which two animal feeds--clam shells and oyster shells--have been under indefinite suspension from price control follows:

Clam shells--cleaned, washed, graded, and ground shells of clams
Fish loaf, ground, canned
Fish pastes--imported and domestic
Octopus, dried, canned--imported and domestic
Oyster shells--cleaned, washed, graded, and ground shells of oysters
Salted sardine fillets--imported and domestic
Sardine and tomato paste--imported and domestic
Stockfish, baled--imported
Trout, canned--imported and domestic
Turtle meat, canned--imported and domestic

PRICE CONTROL EXTENSION ACT: Clarification as to how foods and their by-products are affected by exemption provisions of the Price Control Extension Act of 1946 was made on July 27 by the Office of Price Administration.

Products that are removed from ceilings are generally those foods or feeds containing 20 percent or more by volume of commodities that have been specifically exempted from price control under the new act. If they contain less than 20 percent of the exempted item, they remain under ceilings.

On all but one group of exempted food items--poultry and eggs and their by-products--ceilings will be restored on August 21, 1946, unless the decision of the Decontrol Board is that they not be brought back under ceilings. On the above exceptional group, action of the Decontrol Board to restore ceilings will be required before they may go back under price control.

A listing of exempted commodities follows:

MEATS: All livestock and all edible meats such as beef, veal, pork, lamb, and mutton. Specified edible products such as canned meats, natural casings, animal gelatin, and all products from livestock going into animal feeds and feeds made from these products.

FATS AND OILS: Cottonseed and soybean oils. Specified food products and feed byproducts of cottonseed and soybean oils such as most mayonnaise, salad dressings, oleomargarine and vegetable shortenings. Specified edible fats and oils made from livestock, for instance, lard and edible beef fats such as are used in some shortenings. Specified foods or feeds made from fats, oils, and greases derived from livestock. (Any fat or oil that is sold to an industrial user for production of an inedible product, such as paint, remains under price control.)

POULTRY AND EGGS: Poultry, such as chickens, turkeys and ducks, and eggs. Specified food products such as canned chicken and powdered eggs and feed byproducts made from poultry or eggs.

DAIRY PRODUCTS: All dairy products, including milk, butter, cheese, and ice cream. Specified food or feed byproducts made from dairy products.

GRAINS: All grains: wheat, corn, barley, oats, rye, grain sorghums, flaxseed, soybeans, and mixtures of these grains. Specified byproduct animal or poultry feeds made from these grains.

COTTONSEED AND SOYBEANS: All cottonseed and soybeans. Specified food or feed products made from them--among soybean food products, such items as various canned meat substitutes, soya flour and soya bread.

The following are examples of products that will remain under price control:

PROCESSED MEAT PRODUCTS containing less than 20 percent meat: Corned beef hash, meat stews, frankfurters and beans, chili con carne, tamales, soups, pork and beans, and spaghetti and meat balls.

OILS: Peanut oil, corn oil, linseed oil, olive oil, imported vegetable oils, inedible tallows, greases and fish oils, cottonseed and soybean oil products sold for non-edible purposes, such as for soap.

CANNED FOODS PACKED IN OILS: Sardines, tuna, and certain imported delicacies. (These remain under price control regardless of the percentage of soybean or cottonseed oil involved.)

ALL OTHER FOOD ITEMS THAT WERE UNDER PRICE CONTROL ON JUNE 30, 1946, NOT SPECIFICALLY EXEMPTED: Such as sugar and syrups, canned fish, certain fresh and frozen fish, malt beverages, other alcoholic beverages excepting wine, candy; jams, jellies and preserves; coffee, tea and cocoa; other imported foods.

DECONTROL: Extension for an indefinite period of decontrol of the fresh and frozen fish and seafood now free from ceilings and suspension of price control on halibut were announced on August 16 by the Office of Price Administration. These actions, effective August 16, were taken in Amdt. 48 to SO-132.

Decontrol of these fresh and frozen fish and seafood was to expire on August 18, OPA said. The Department of Agriculture is considering whether to put these items on their September 1 list of foods in short supply. If the Department does not certify these items, they will be decontrolled under the new price control law. Uncertainty resulting from reinstatement of controls on August 18 for what might be a temporary period until September 1 would disrupt production and distribution of these varieties of fish, the agency stated.

Halibut, which was decontrolled by the action, is distributed almost exclusively as fresh or frozen. It is sold through the same distributive channels as the previously uncontrolled varieties of fish. Decontrol of this species, OPA said, will have a negligible effect on the price level of fish generally.

Species not included in these actions include any species of salmon (Pacific), tuna and tuna-like fishes (Pacific), sardines, alewives, and sea herring (North Atlantic), and pilchards. All of these items are still under price control.

CEILINGS REMOVED: Twelve items considered unimportant to the cost of living are being removed from price controls, effective August 26, 1946, the Office of Price Administration announced when issuing Amdt. 50 to SO-132. Fishery products listed were: Canned clam broth, imported and domestic processed fish sauces (except when containing more than 30 percent of tomato solids in the total dry solids).

CONTROLLED ITEMS: The Office of Price Administration on August 31 made public a detailed list of the food, feed, and other agricultural and related commodities which will continue under price ceilings as of September 1.

The list is an elaboration of the Department of Agriculture's first monthly certification of agricultural commodities in short supply, issued in accordance with the Price Control Extension Act of 1946. Under the act, price controls lapse automatically on any agricultural commodity which is not certified to be in short supply.

Both the public and the trade have become accustomed to using OPA's definitions of commodities in operating under price ceilings. The Department of Agriculture has used much broader categories in certifying commodities in short supply. Consequently, the list is being issued to avoid, as far as possible, confusion as to whether specific items remain under ceilings.

Under the price control legislation, the Secretary of Agriculture must certify to the Price Administrator on the first of each calendar month each "agricultural commodity" which he determines to be in short supply. The certification governs the price control status of these commodities but does not affect control of prices on other commodities even though they may be farm products.

Generally speaking, an agricultural commodity is a commodity resulting from the cultivation of the ground, raising and harvesting crops, or the feeding, breeding, and management of livestock. However, the term "agricultural commodity" as it is used in the Emergency Price Control Act and the Stabilization Act has a more limited significance. It has been closely identified with and interpreted to mean those products for which parity or comparable prices have been figured. That interpretation is being continued in the application of the short supply certification.

The term also includes any food or feed commodity processed or manufactured in whole or in substantial part from any agricultural commodity. In addition, the price control act has defined fish as an agricultural commodity.

The Secretary of Agriculture has stated in his September 1 certification that a "food or feed product shall be deemed to be made in substantial part from an agricultural commodity if it contains one-third or more of any agricultural commodity or commodities calculated on the basis of the weight or volume of the total ingredients (exclusive of water added as an ingredient) in such product before mixture."

Food or feed product has been interpreted to mean any derivative of an agricultural commodity or commodities which is or may be eaten or drunk by humans or animals. Agricultural commodities do not, however, include drugs or medicines.

Many other commodities commonly thought of as agricultural are not considered as such in the application of the price control act. Examples are lentils and green olives. Imported commodities, whether or not they have domestic counterparts, are not "agricultural commodities" in this sense. Their status under price control is independent of any action taken by the Secretary of Agriculture under his powers of short supply certification. Commodities produced in territories of the United States also are not considered as agricultural commodities. If such commodities were under control on August 31, they remain under ceilings until removed by independent OPA action.

It was pointed out that not all food, feed, and other agricultural commodities under control were included in the list. Miscellaneous minor commodities under the General Maximum Price Regulation not specifically designated here still are under control.

Some of the commodities ordered controlled by the Price Decontrol Board on August 21, which will not be under specified price ceilings until shortly after September 1, are included in the list of controlled commodities, since a new list of commodities in short supply will not be issued before September 30.

Fishery items included are listed below under two main listings:

Part A, including both imported and domestic items whose domestic portions are agricultural commodities in short supply.

Part B, limited to controlled items which are not agricultural commodities in the application of the act and whose continued control does not depend upon the certification of the Secretary of Agriculture.

PART A

Salmon and all food or feed products processed from salmon
Tuna, bonito and yellowtail (including all tuna-like fish) and all food or feed products processed from them
Pilchards (except for bait)
Sardines, alewives and sea herring (North Atlantic)
Canned fish of the following species: salmon, North Atlantic sea herring, North Atlantic alewives, Maine sardines, tuna, yellowtail, bonito, other tuna-like fishes, pilchards and mackerel
Canned fish flakes
Cured fish as follows: cod, hake, pollock, haddock, ling, saithe and cusk
Fish oils and fish meal and fish scrap

PART B

Imported canned fish except those exempted by SO-132
Imported smoked, dried, salted or pickled fish except those exempted by SO-132.
Marine animal oils

In the case of imported commodities, OPA's general policy will be to remove from price control those imported items whose domestic counterpart is not under price control. Exceptions to this policy will be made where special circumstances require the maintenance of controls on the imported item.

CANNED AND FROZEN SOUPS: All canned and frozen condensed and ready-to-serve soups, including broths, bouillions, consommes, and chowders, have been removed from price control, the Office of Price Administration announced on August 26 when issuing Amdt. 51 to SO-132.

CANNED FISH: Amendments 1 to SO-134 and 20 to SR-14C to GMPR, effective August 13, revoke the provisions in those regulations which limited the percentage of canned fish or seafood which canners could sell to primary distributors during any calendar year.

This action is made necessary, OPA said, by the amendment to Section 2 (j) of the Emergency Price Control Act inserted by the Price Control Extension Act of 1946, which prohibits the Administrator from fixing "a quantity or percentage of any product which any seller may sell to any buyer."

MAINE SARDINES: Higher retail prices for canned Maine sardines are in prospect as the result of an increase of $1.20 a case (100 ¼ pound cans or 48 ¾ pound cans) in canners' ceilings allowed August 28 by the Office of Price Administration in Amdt. 8 to MPR-184.

The canner increase will be effective August 28, 1946, and the retail increases, amounting to about 2 cents on the ¼ size can and 4 cents on the ¾ size, will be made with the first shipment each retailer receives after his supplier's price has risen.

The increase is necessary, OPA said, to permit the industry its peacetime percentage on net worth in the face of a prospective decline in this year's catch--

expected to be about 60 percent of last year's production--and to offset approved wage increases granted by part of the industry.

A former 30 cents a case addition permitted on sardines canned west of the Penobscot River or outside Maine is now removed, since the general increase makes it unnecessary.

Excerpts from Amdt. 8 to MPR-184 follow:

In Maximum Price Regulation No. 184, § 1364.112 (a) is amended to read as follows:

(a) The prices set forth below are the maximum prices per case for Maine sardines, packed in the listed container sizes and styles of pack, f. o. b., the railroad shipping point nearest the cannery. These maximum prices are gross prices and the canner must deduct therefrom his customary allowances, discounts, and differentials to purchasers of different classes. Canners must notify wholesalers, retailers and other distributors of the prices listed below in accordance with the directions set out in § 1364 113.

Standard keyless can pack (cans not scored for convenience in opening and without keys).

¼'s cottonseed oil, soybean oil, mustard or tomato sauce	$5.75
¾'s cottonseed oil, soybean oil, mustard or tomato sauce	5.75

Standard key can packs (cans scored for convenience in opening and with keys).

¼'s cottonseed oil, soybean oil, mustard or tomato sauce, decorated (lithographed) cans	$6.38
¼'s cottonseed oil, soybean oil, mustard or tomato sauce, wrapped or in cartons	6.63
¾'s mustard or tomato sauce, wrapped or in cartons	6.25

Fancy grade packs (cans scored for convenience in opening and with keys).[1]

1/4's peanut oil, decorated (lithographed) cans	$7.075
1/4's peanut oil, wrapped or in cartons	7.325
1/4's cottonseed oil, soybean oil, smoked, decorated (lithographed) cans	8.075
1/4's cottonseed oil, soybean oil, smoked, wrapped or in cartons	8.325
1/4's olive oil, decorated (lithographed) cans	11.075
1/4's olive oil, wrapped or in cartons	11.325
1/4's olive oil, smoked, decorated (lithographed) cans	11.575
1/4's olive oil, smoked, wrapped or in cartons	11.825

This amendment shall become effective August 28, 1946.

Issued this 26th day of August 1946.

[1] Without keys deduct $0.125 from the listed price.

CANNED SALMON: Consumers will pay about four cents more for a one-pound can of pink salmon and about six cents more for a one-pound can of Alaska red salmon as a result of an increase in canners' maximum prices, the OPA announced on August 29.

This action was taken because the Department of Agriculture notified the Office of Price Administration that it was necessary to encourage production. Under the new price control law, OPA must put into effect price increases of this type when they are recommended by the Department of Agriculture.

The action, effective August 30, 1946, increases canners' ceilings for all varieties of canned salmon, except Columbia River bluebacks (the same species as Puget Sound sockeye), by 12½ percent.

Excerpts from Amdt. 5 to MPR-265--Sales by Canners of Salmon--which became effective August 30, 1946, follow:

1. The table of prices in § 1364.562 is amended to read as follows:

Variety and style of container:	Price per case
Alaska King, 1-lb. talls	$17.32
Alaska Chinook:	
1-lb. flats	21.78
½-lb. flats	12.38

	Price per case
Alaska Red:	
1-lb. talls	18.56
1-lb. flats	19.18
½-lb. flats	12.38
Coho:	
1-lb. talls	14.36
1-lb. flats	15.22
½-lb. flats	9.90
¼-lb. flats	6.44
Pink:	
1-lb. talls	$9.90
1-lb. flats	9.90
½-lb. flats	6.93
¼-lb. flats	4.83
Chum:	
1-lb. talls	9.40
½-lb. flats	6.66
Copper River Sockeye:	
1-lb. talls	18.56
1-lb. flats	19.80
½-lb. flats	13.61
Puget Sound Sockeye:	
1-lb. talls	22.28
1-lb. flats	23.51
½-lb. flats	14.11
COLUMBIA RIVER	
Chinook, Fancy:	
1-lb. talls	23.51
1-lb. flats	25.49
1-lb. ovals, C. R.	29.70
½-lb. flats, C. R.	16.09
½-lb. ovals, C. R.	19.80
¼-lb. flats, C. R.	8.17

	Price per case
Chinook, Choice:	
1-lb. talls	19.80
1-lb. flats	21.78
½-lb. flats, C. R.	12.38
¼-lb. flats, C. R.	6.44
Chinook, Standard:	
1-lb. talls	16.09
1-lb. flats	17.32
½-lb. flats, C. R.	9.90
¼-lb. flats, C. R.	5.94
Chinook, unclassified:	
1-lb. talls	$12.38
1-lb. flats	13.61
½-lb. flats, C. R.	7.92
Silverside:	
1-lb. talls	14.60
1-lb. flats	17.32
½-lb. flats, C. R.	9.90
¼-lb. flats, C. R.	6.44
Steelheads:	
1-lb. talls	19.80
1-lb. flats	21.78
½-lb. flats, C. R.	12.38
½-lb. ovals, C. R.	14.85
¼-lb. flats, C. R.	8.44
Bluebacks:	
½-lb. flats, C. R.	14.74
Chums:	
1-lb. talls	9.40
1-lb. flats	11.14
½-lb. flats, C. R.	6.19

CANNED TUNA: Retail price increases of 1½ cents for the No. ½ can of albacore and 3 cents for light meat tuna (including tonno tuna), bonito, and yellowtail packed in the same size container, were announced on August 23 by the Office of Price Administration, when issuing Amdt. 6 to MPR-299, effective August 23.

The increases are necessary to meet a provision of the Price Control Extension Act of 1946 which stipulates that maximum prices for "any fish or seafood commodity or for any commodity processed or manufactured in whole or substantial part therefrom shall not be below the average price therefor in the year 1942," OPA explained.

Ceilings for canners are effective August 23, 1946. Wholesalers, retailers, and other distributors will not pass on the new ceilings to their customers until the first shipment carrying the new rates is received from their sellers.

The new canners' ceilings are:

Variety	Style of container and price per case		
	No. 1 tuna	No. ½ tuna	No. ¼ tuna
Albacore:			
Fancy	$29.20	$16.00	$9.00
Standard	25.45	14.00	8.00
Grated	25.00	13.00	7.50
Flake	25.00	13.00	7.50
Light meat:			
Fancy	21.80	12.00	7.00
Standard	19.95	11.00	6.50
Grated	19.70	10.35	6.20
Flake	19.00	10.00	6.00
Tonno	25.35	13.90	7.95
Bonito:			
Standard	17.85	9.50	5.75
Flake	16.00	8.50	5.25
Yellowtail:			
Standard	16.85	9.00	5.50
Flake	15.00	8.00	5.00

Ceiling prices for canned tuna containing dark meat are left unchanged, OPA said, as manufacture of this type of pack is a comparatively recent development in the industry.

CANNED PILCHARDS: An increase of $8 a ton has been allowed in the California fishermen's ceiling price for pilchards, the Office of Price Administration announced on August 20, when issuing Amdt. 20 to MPR-579, to become effective on that date.

At the same time, the new ceiling of $30 a ton was made applicable in the neighboring States of Oregon and Washington, where the pilchard catch has been increasing from low wartime levels.

Pilchards are not sold as fresh fish at wholesale and retail. They are sold direct by the fishermen to canneries.

No change has been made in the ceilings for canned pilchards. OPA stated that if the action results in financial hardship for the canneries, they can apply for an adjustment in the ceiling.

OPA also stated that the increase was granted to give the California fishermen returns on their pilchard catch equivalent to those experienced in 1944. Last year's production was only 75 percent of the 1944 volume, and indications are that the 1946 catch will be similar to the 1945 quantity.

Treasury Department

CANADIAN HALIBUT VESSELS: The Treasury Department, on July 29, issued an order waiving compliance with Section 4311 Revised Statutes (46 USC 251) to the extent necessary until and including December 31, 1946, to permit Canadian fishing vessels engaging in the North Pacific halibut fishery only to land their catch of halibut in ports of entry in Alaska upon compliance with applicable customs laws.

September is the biggest month of the hake and yellowtail fisheries. Cod catches are relatively low; haddock landings are falling off but still good, especially from South Channel. Rosefish and whiting are coming in almost as fast as they did at the peak of their seasons and whiting are still abundant. In Maine this is the best month for lobsters.

--Conservation Bulletin No. 33

RECENT FISHERY PUBLICATIONS

Listed below are informational publications which recently have been processed by the Division of Commercial Fisheries. With the exception of the FL series, these may be obtained, free of charge, from the Division of Commercial Fisheries, Fish and Wildlife Service, Washington 25, D. C. FL publications are available from the Fish and Wildlife Service, Merchandise Mart, Chicago 54, Illinois.

Number	Title
CFS-274	- Current Fishery Trade, Monthly Summary, Jan.-Mar. 1946
CFS-275	- Frozen Fish Report, July 1946
CFS-276	- Pacific Coast Fisheries, 1943, Annual Summary
CFS-277	- New England Landings, April 1946
CFS-279	- Canned Salmon, 1945, Annual Summary
CFS-282	- Vitamin A Report, April 1946
FL-188	- The Tuna Industry of Southern Spain
FL-189	- Icing of Fish at Sea
SL-14 (Revised)	- Wholesale Dealers in Fishery Products, South Carolina, 1945 and 1946
SL-15 (Revised)	- Wholesale Dealers in Fishery Products, Georgia, 1945
SL-102 (Revised)	- Firms Canning Sardines, 1945
SL-104 (Revised)	- Firms Canning Mackerel, 1945
SL-105 (Revised)	-- Firms Canning Alewives and Alewife Roe, 1945
SL-106 (Revised)	- Firms Canning Shad or Shad Roe, 1945
SL-108 (Revised)	- Firms Canning Salmon Eggs for Bait, 1945
SL-109 (Revised)	- Firms Canning Caviar and Misc. Fish Roe, 1945
SL-117 (Revised)	- Firms Canning Sea Herring, 1945
SL-118	- Firms Canning Groundfish Flakes, 1945
SL-152 (Revised)	- Firms Manufacturing Oyster and Marine Clam Shell Products, 1945

Reprints (Features) From Commercial Fisheries Review, July 1946.

Sep. No. 141 - A Cardboard Smokehouse
Sep. No. 142 - Feeding Fish Meal to Ducklings
Sep. No. 143 - The Japanese Salmon Industry

Designations for fishery publications are interpreted as follows:

CFS - Current fishery statistics of the United States and Alaska.

SL - Statistical lists, consisting of lists of dealers of fishery products and manufacturers of byproducts.

FL - Fishery leaflets.

MDL - Market development lists of frozen food locker plants and locker associations.

5502

Compositors: Jean Zalevsky
Norma C. Dressler

THE SALMON FISHERY

Pacific salmons are the most valuable fishery resource belonging to the United States. They yield around 600 million pounds of fish a year, 85 percent of which is used to manufacture the largest pack of canned fish produced in this Nation. About 100 million pounds are sold fresh, frozen, smoked, or cured. Close to 90 percent of the United States production and 55 percent of the world production of salmon comes from Alaska, where the resource is more valuable than any other. Indeed, 70 percent of Alaska tax revenues come from salmon industries.

Pacific salmon spend a large part of their lives in the ocean, then enter fresh water to ascend streams and spawn. The availability of suitable spawning grounds, more than anything else, controls their distribution and abundance. Whatever unfavorable conditions, short of lethal ones, may prevail in the lower reaches of a stream, so long as the stream gives clear passage to good spawning grounds, it supports salmon. Spawning areas must have bottoms covered with gravel of a certain size range and clear water flowing at a moderate and reasonably constant rate. Exact requirements vary according to species. Pink and chum salmon find suitable grounds generally not far from the ocean, often not more than a mile away; kings and cohos generally ascend the larger streams and go farther; reds can inhabit only streams having access to lakes.

--Senate Document No. 51

OYSTERS

Starfish attack young and old oysters, gripping them with their five rays or arms and forcing the shells open.

Oysters are found only in enclosed bays, coves, and river estuaries where the saltiness of the water is reduced by the inflow of fresh water.

Since the oyster feeds by opening the shells and drawing in water, it is able to thrive and grow without moving about in active search of food. As the sea water is strained through the gills the food organisms become entangled in the layer of adhesive slime that covers all the soft parts of the body. Once entangled, they are driven along to the mouth by the beating of hair-like cilia. As long as the oyster's shells are open, this process of drawing in water with its contained food and oxygen is going on. Oysters growing between the tide lines close their shells when the tide is out and so do not grow as rapidly, as a rule, as those living in deeper water. Changes in temperature also affect feeding, and during months of cold weather the shells remain closed. At a temperature of about 78° F., however, large volumes of water are filtered by the oyster, as much as 27 quarts of water passing through the gills of an adult in an hour.

In New England the most important enemy of the oyster is the starfish, which, in spite of long-continued and costly efforts by oystermen to reduce its numbers, takes a half-million-dollar toll each year in Long Island Sound alone. Recently biologists of the Fish and Wildlife Service have developed a chemical method of control which promises to give better results than the older mechanical methods.

--Conservation Bulletin No. 33

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